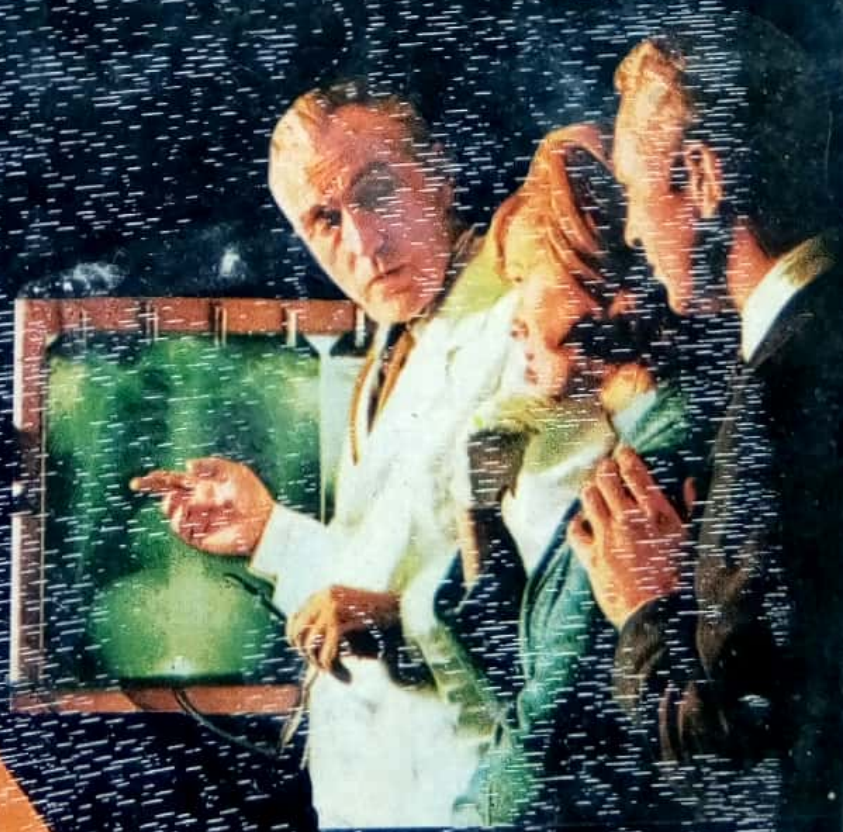
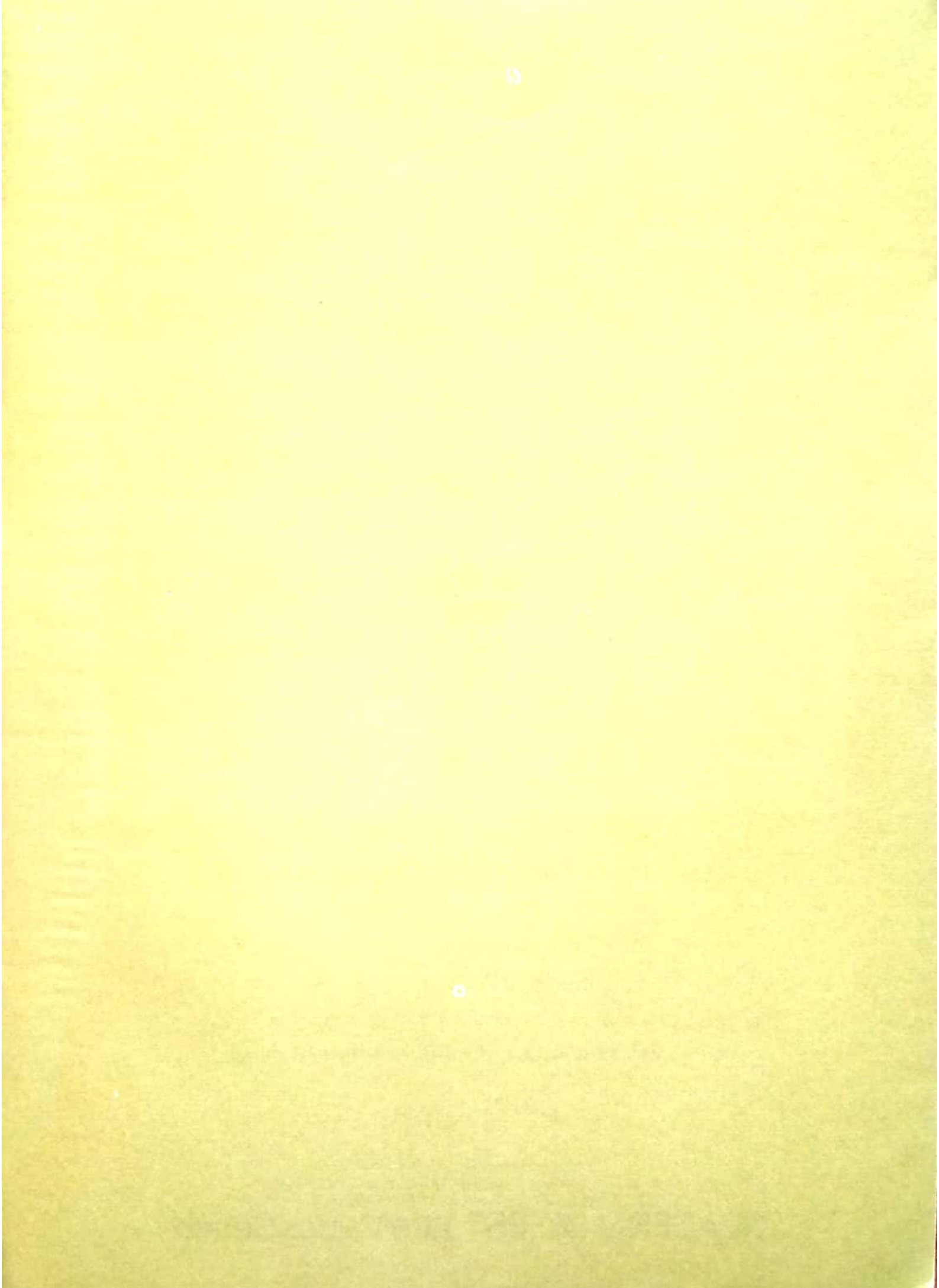


HEALTH- DRUGS, DRINKING, DRIVING, SMOKING, -AND YOU



Life Values Series



HEALTH—Drugs, Drinking, Driving, Smoking—AND YOU

Life values to weigh, judge and discuss

A series of anthologies,
based on selections adapted from
READER'S DIGEST

Prepared and edited by
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Personal Memo To:

You

LIFE GUARDING: that's the theme of this book. The term encompasses not only your job of guarding your own life, but also of helping others to guard theirs. Does the thought occur to you that this is the most important job you'll ever have? It's certainly basic!

A book such as this could be a doomsday tome, filled with dire warnings and fearful threats calculated to scare you into behaving. Reassure yourself by looking at the Table of Contents. First, you can expect to be informed by "Some Hows and Whys of Good Health" and three fearful and wonderful "Inside Stories." (If you need help with technical terms, be sure to use the glossary.) Now we come to a chapter on drug abuse that drips with horror because that's the way it is: "Dead-End Trail to Dynamite Stuff." Next, it's a matter of "Facing Facts About Drinking and Smoking." No threats or warnings, mind you! In the final chapter on "Safety Hazards and Helps," you'll find the classic article that has caused three generations to go lighter on the gas pedal: —*And Sudden Death*. Yes, we do admit to blood-drenched warnings here—but don't you agree that they're justified? The book concludes with practical advice on administering first aid.

From: *The Editors*

"When heart is young and life an eagle poised"—as in your case—why should you care about health rules and hazards? What interest have you in hearing the sober truth about drinking or in finding out that the drug trip is a voyage to nowhere? Youth needs to experiment! Red blood cries out for thrills! True. But youth can't afford to be naive. Youth needs to seek firm, informed convictions and definite answers to invitations such as:

"Don't spoil the party! Have one!"

"Come on—don't be chicken! Show 'em!"

"Join me just this once."

"You're only young once. Take a chance!"

This book doesn't provide you with pat answers. But the questions that follow the articles will encourage you to arrive at your own conclusions and formulate your own answers. They are the ones you will live by when the chips are down and you have to make final, irrevocable decisions.

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SOME
HOWS
AND WHYS
OF
GOOD
HEALTH

Billions of disease germs attack you daily. How does your body combat them? Nature has provided you with a miraculous system of defenses.

How Your Body Keeps You Well

RUTH and EDWARD BRECHER

Not sickness but *health*," a famous physician once remarked. "is the greatest of medical mysteries."

Your own good health is an example. Every day your body is assailed by billions of germs, many of which can produce illness or even death. Yet you *stay well*. Countless bacteria and viruses gain entry into your body with the food you eat or the air you breathe or through breaks in your skin. Yet you *stay well*. Some of them establish permanent residence in your mouth, your nose and throat, or your intestines, where they may multiply fantastically. Yet you *stay well*.

What protects you from

these ceaseless assaults by bacteria and viruses?

Through decades of study, scientists have been slowly finding out. Your health is safeguarded, they report, by an ingenious series of defenses arranged in depth like the successive lines of an army entrenched to ward off invaders.

Suppose, for example, that a germ-laden fleck of dust floats into your eye. In all probability, there is nothing to worry about. Your eye surface is constantly bathed in tears, which contain a bacteria-destroying antiseptic called lysozyme. Lysozyme is so powerful that a single tear-drop diluted with half a gallon of water will still destroy at

least one species of germs.

Your saliva and other fluids manufactured by your body also contain lysozyme, as well as other antiseptic chemicals. Even your bare skin has considerable germicidal power. For example, virulent dysentery bacteria in a drop of fluid placed on a glass slide will survive for hours, while those in a drop placed on the clean palm of your hand will be dead within about 20 minutes.

Amazing Gantlet

Some kinds of germs can survive these external defenses and even multiply on your skin. Before they can harm you, however, they must gain entry into your body and then run an amazing gantlet of other defenses. Germs entering through your mouth, for instance, are attacked by the antiseptics in your saliva. For those that are swallowed and washed into your stomach, powerful digestive juices lie in wait. Few reach your intestines alive.

Germs which gain entry through your nose must thread the complicated maze of your air-filtering nasal passages. The surfaces of these passages are

kept moist by a mucous fluid which acts like flypaper in catching germs. If the germs cause irritation, they are sneezed out; or your nose starts to run and they are flushed out. Germs which manage to reach the tubes to the lungs are also trapped in a mucous fluid, and are sometimes coughed out. Tiny hairlike fibrils are constantly waving in the mucous fluid, propelling it toward your throat. Germs trapped in the fluid are similarly propelled. Ultimately they are swallowed and meet their fate in the well-guarded gastrointestinal tract.

When germs get into your body through breaks in your skin or mucous surfaces—breaks so small that they may be unnoticed—the peril is seemingly greater. Let's say that you step on a germ-laden nail. Each germ thus entering your tissues may divide into two after 20 minutes or so, and divide again in another 20 minutes. If this rate were to continue, you would be host to a million descendants within seven hours, and to several quadrillion the next day. By then your entire body would,

of course, be overwhelmed. But before this can happen another type of defense, called inflammation, will have come to your aid.

Inflammation begins when various chemicals are released at the site of a germ invasion by the invaders or by the injured cells in your body. These chemicals seep outward in all directions until they reach the nearest blood vessels. There they cause a relaxing of the vessel walls that enables plasma, the watery part of the blood, to seep out. Accompanying the blood plasma are white blood cells called leucocytes and various chemicals that curb bacterial growth.

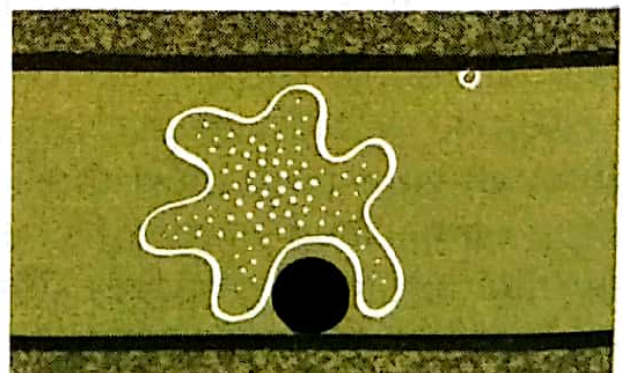
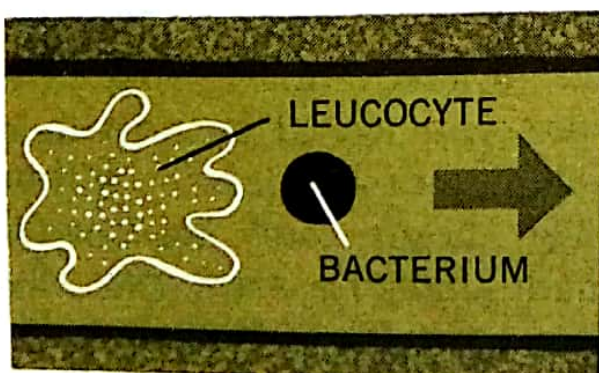
Leucocytes are among the most curious and most effective of your body's defenses. In appearance they resemble the one-celled animal called amoeba, and like the amoeba they can propel themselves

from place to place within your body. In some unexplained way, leucocytes are attracted as if by a magnet to the site of a bacterial invasion. When they arrive they gobble up any invading particles they find.

Trapped Germs

It is fascinating to watch this gobbling-up process through a microscope. A leucocyte slithers up to an invading bacterium, crowds it against a solid surface, then flows its jelly-like body around the bacterium to "corner" it. Next it opens a hole in its skin-like membrane, and the bacterium is completely engulfed. A moment later the leucocyte slithers off after its next quarry. Millions of leucocytes are often mobilized at the site of an infection.

Other factors involved in inflammation help the leucocytes in their work. In the blood plasma is a chemical called



fibrinogen (the chemical responsible for blood clots), which quickly solidifies into a network of strands and, with other plasma substances and the leucocytes, forms a wall around the battlefield, trapping the germs so that the infection is localized. Boils and abscesses are typical examples of how this walling-off process safeguards the rest of your body from germ invaders.

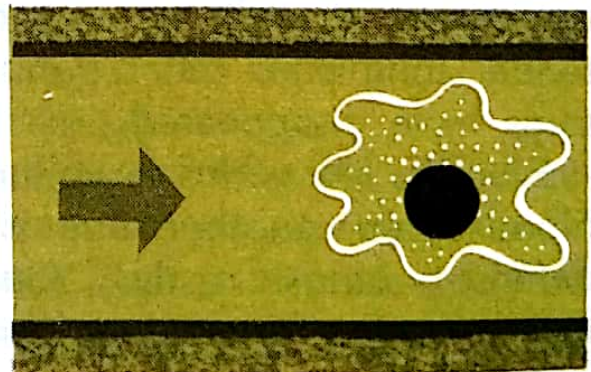
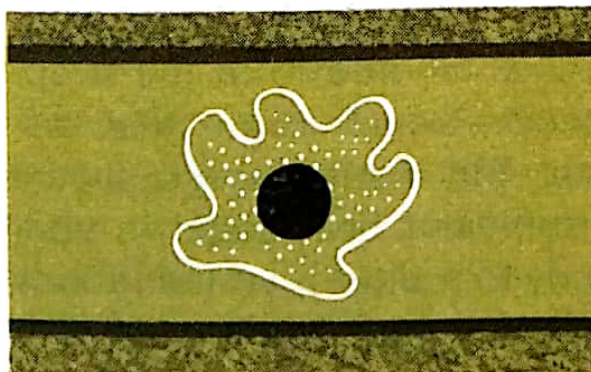
Even though bacteria are thus contained, the resources of your entire body are mobilized to defeat them. Some of the chemicals released during the battle enter your bloodstream and carry the alarm to storehouses throughout your body where leucocyte reserves are maintained. Within minutes millions of additional leucocytes are released into your blood, which carries them to all your tissues. While this is going on, your bone marrow

is also alerted and it speeds up the manufacture of new leucocyte reserves.

If the leucocytes cannot complete the mopping-up operation, they are joined by larger (but still microscopic) cells called macrophages. These can gobble up not only bacteria but also leucocytes that are harboring bacteria.

Usually when a leucocyte or a macrophage engulfs a germ, it means death to the germ, but not always. Some bacteria can survive for long periods within cells which have gobbled them up. Indeed, a cell may occasionally prolong the life of a bacterium by protecting it from antiseptic blood substances and from the drugs your physician prescribes to help combat the infection. Your body requires a way to dispose of these germs after they have been engulfed, and of other waste products.

To provide for this, your



body tissues are drained by a network of channels called the lymphatic system. Leucocytes, macrophages and invading particles enter the vessels of this network and are carried by the lymph fluid to "regional lymph nodes," or glands, situated at strategic points throughout your body. Each node serves as a filter, holding back bacteria and other particles. The lymph fluid flows on from one node to another until it reaches the ones in the neck, where it is discharged into the bloodstream. By then, generally, all germs have been filtered out of the lymph fluid.

Following an illness, however, disease germs may survive for days or even weeks within the lymph nodes. The glands in your neck are the final barriers which prevent germs from reaching your bloodstream, and the survival of germs in them for long periods explains why these glands sometimes remain swollen and tender long after other symptoms have disappeared.

Even if a few germs reach the bloodstream, another line of defense stands ready. Your bone marrow, liver, spleen and

a few smaller organs are equipped with multitudes of macrophages to filter invading particles out of your blood just as the lymph nodes filter your lymph fluid.

Antibody Action

How are the leucocytes and macrophages able to distinguish between invading germs or other particles and the cells or molecules of your own body? Your body has a built-in identification system which *labels* invading particles. These labels, which attach themselves to invaders, are called antibodies. Leucocytes and macrophages will occasionally engulf almost any particle they happen upon, but the ones they search out and devour with the greatest voracity are those labeled as invaders by antibodies.

Most cases of recovery from an infection are traceable in large part to antibody action. If you have never had scarlet fever, your body lacks antibodies tailored to fit the streptococci which cause that disease. But if streptococci secure a sufficient beachhead in your body to multiply, your antibody factories start tooling up. For

several days, perhaps, the germs continue to multiply and you get sicker and sicker. By then, however, full-scale antibody production has begun and antibodies are turned out in large amounts. These latch onto the scarlet-fever streptococci, which, as soon as they are labeled, fall prey to the voracious leucocytes and macrophages, and your recovery begins. Substances in your blood called *complement* also help out by destroying bacteria to which antibodies are attached.

It is chiefly your antibodies which make you immune to second attacks of many common illnesses. The first time you suffer from a disease such as scarlet fever or measles your antibody factories take several days to learn the right pattern. Once the lesson is learned, however, production can begin much more promptly, and large amounts of antibodies of the desired pattern may be turned out within a few hours after the entry of a few thousand germs. Thus the second and subsequent invasions of a particular type of germ are frequently wiped out before you even suspect that you've been infected.

Antibodies are also agents which make it possible to control infectious diseases through vaccination. A vaccine is a substance which teaches your body in advance how to manufacture antibodies promptly against a disease you have not yet had. The Salk polio vaccine, for instance, uses polio viruses which have been killed by formaldehyde to teach your body how to manufacture antibodies against living polio viruses.

Flu Flaps

A few kinds of germs have learned how to evade our antibody defenses. The influenza virus is the most striking example. Every few years a type of flu virus comes along which is unaffected by the common flu antibodies. When this happens, an influenza pandemic sweeps the world. Within a few years almost everybody gets the new kind of flu and develops antibodies against it—whereupon a different flu virus pops up. Each type of flu requires a separate antibody.

Most of the antibodies circulating in your blood are found in a part of the blood plasma called gamma globulin. This

antibody-rich substance can be extracted from the blood of donors and stored for considerable periods. Small injections of gamma globulin will provide temporary immunity to measles and infectious hepatitis; the "borrowed antibodies" act just like the antibodies you manufacture yourself.

Newborn babies also stay well on borrowed antibodies. Their antibody factories operate poorly or not at all during

the first few weeks of life, but antibodies received from their mothers before birth protect them for a time from most of the diseases to which the mothers themselves are immune. Babies also get protective antibodies in mother's milk, especially during the first few days of nursing.

Could mankind survive without the human body's miraculously coordinated "defense in depth"? It seems unlikely.

-
1. How does lysozyme help to protect your health?
 2. How do your body defenses attack invading germs that gain entry into your body through your mouth? your nose? breaks in your skin?
 3. In the battlefield of inflammation, what is the work of leucocytes? of fibrinogen? of bone marrow?
 4. What happens if germ invaders are not walled in? Explain the work of the macrophages.
 5. How does the body dispose of germs that have been engulfed? What is the work of lymph nodes?
 6. Why do neck glands often remain swollen after an illness?
 7. If germs manage to get into the bloodstream, what is the final line of defense?
 8. What are antibodies? How are they of aid in case of infection? of vaccination? How may antibodies be borrowed? For what purposes are they used?
-

The Remarkable Self-Healing Powers of the Mind

MORTON M. HUNT

Yes, it's true. Nature has provided your mind with powerful resources for withstanding stress and strain. If your mind becomes ill, what forces does it have to help restore its normal balance?

During World War II, I was an Eighth Air Force pilot, flying lonely reconnaissance missions deep into Germany week after week. Under this stress I became strange and alien to myself: my handwriting became crabbed and illegible, I drank and gambled night after night, I could read nothing more substantial than the scandal sheets, and music, one of

my chief joys, became boring and meaningless. One night, on my way to the briefing room, I even seriously considered trying to break my ankle—to avoid being sent out on another flight.

I was on the verge of a breakdown when the fighting ended. Then for weeks I slept, daydreamed and drifted through my duties. Meanwhile, deep in-

side, where the wellsprings of joy and health reside, a healing and a regrowth must have been taking place. For gradually I began to read books again, my handwriting ceased to look like that of a crippled old man, and one day, hearing a familiar Mozart aria on a nearby radio, I suddenly felt a flood of good feeling wash through me. I had the eerie sensation that all at once I was in the presence of a long-lost friend—myself. "It's me!" I thought in joyful amazement. "I'm back!"

Spontaneous recoveries from emotional ailments are vastly more common than most of us realize. What does it? The mind itself.

A decade or so ago, most psychiatrists thought that an ill mind had little chance to cure itself; their thinking was still focused on the mind's frailties. Today that's changing. Many psychiatrists now stress that the human mind, like the body, has a whole battery of weapons to heal its own ills. Without denying the value of psychiatry for the severely disturbed, the new viewpoint suggests that millions of people with emotional problems have the resources to heal

themselves.

The Balance Restorers

The mind's self-healing mechanisms are surprisingly parallel to those of the rest of the body. Take one of the body's basic principles, the maintenance of equilibrium between its organ systems: when we get too hot, for example, we sweat, in order to keep our temperature constant. In a comparable way, the mind tries to restore emotional balance when it is upset. People plagued by feelings of unworthiness, guilt or inadequacy often unconsciously turn to an occupation which offsets these feelings—a mental device known as "compensation." An excellent illustration of this is Glenn Cunningham, who, having been burned as a child and told he would never walk again, not only walked but became one of the world's greatest milers.

A parallel also exists between the body's ability to wall off an invading foreign object within a cyst and the mental-balance restorer called "rationalization." When we talk ourselves into thinking an agreeable thought about a disagreeable

fact, we are encysting the thing that hurts us. A friend of mine, for example, lost money in a foolish investment, and now cheerfully says of the experience, "It was an expensive lesson—but it was worth it."

In the past, many psychiatrists thought of rationalization, compensation and the other mental defenses as unhealthy. Today, some boldly state that although exaggerated defense reactions can be harmful—like fevers that run too high—more often mental defenses are curative balance restorers.

No End to Emotional Growth

The new viewpoint is changing another pessimistic notion: the theory held by some psychoanalysts that we stop growing emotionally after adolescence, that the flaws built into a person's character in the early years can be removed only by intensive therapy. The latest data indicate that the personality often straightens itself out during maturity.

Many a college student who drops out is diagnosed as having a "character disorder"—as being impulsive, willful, irresponsible, lacking in con-

science. Folk wisdom has been optimistic about the wild one, however. "He'll settle down," it says. Pollyanna-ish? No; researchers at Yale surveyed a number of men who had dropped out because of emotional problems, found that many of them had gone back to college and finished well, and that most of the group had done well in later life.

Why? Because emotional growth never stops. It often takes only the sunshine and rain of love, work, parenthood to make the bent plant straighten up.

The Healing of Love

Freud said that each love we experience, whether for parent, beloved or friend, leaves a deposit in the self, enlarging and maturing it. When we fall in love, we gain a sudden new perspective on ourselves: we know how we want the loved one to see us, and we try to transform ourselves to match that image. Moreover, love is a completion, a satisfying of deep needs; most of us fall in love with someone whose personality is the complement of our own (the strong, driving

person with the frail, timid one, for instance) and through whom we can try to fulfill ourselves.

A few years ago, the Dallas Child Guidance Clinic studied 34 adults who had been uncommonly shy and withdrawn children. Most of them, it was revealed, had turned out quite well—and, significantly, three quarters of these had married extroverts, who completed their personalities and healed their old hurts.

The Challenge of Work

Thomas Carlyle once wrote, "Work is the grand cure for all maladies and miseries that ever beset mankind." Neuroses are, in a sense, childish things, and some persons are fortunate enough to find challenges so serious and adult that they are able to put away childish things. Many years ago, a young midwestern lawyer suffered such depressions that his friends thought it wise to keep knives and razors out of his reach. He wrote: "I am now the most miserable man living. Whether I shall ever be better, I cannot tell; I awfully forebode I shall not."

He was wrong. The challenges that life offered him brought him a health and a strength that saved him and his country from dissolution. His name was Abraham Lincoln.

Forgetting and Reconditioning

One of the most important self-curing agencies is our human propensity to forget unpleasant things. Psychological researchers have given subjects tasks and puzzles to do, arranging them in such a way that not all could be completed. Afterward, when the subjects were asked to recall which tasks they had finished and which they had not, those with shaky self-esteem tended to remember only the tasks they had managed to complete. As someone has said, "Remembrances embellish life; forgetfulness alone makes it endurable."

More demanding than forgetting is a laborious process we might call "reconditioning"—a kind of rewiring of the brain in which our reactions are changed, one by one. We do it, for example, when we grieve for a dead person. The very process of going over the fond thoughts again and again grad-

ually conditions us to our new status. The healthy mind slowly arrives at the point where it can look back with a loving smile instead of tears.

Psychological Antibodies

Just as a cured infection leaves antibodies behind, a hurt, once healed, may leave us with a net gain—greater self-awareness, increased maturity.

An event that shocks can set off a process of reorganization and growth in the whole personality. Many a playboy has grown up only after his parents died. Going off to military service has transformed more than one disturbed young man.

Even a severe mental illness can sometimes leave a person who recovers from it healthier than he was, thanks to deeper self-understanding, according to famed psychiatrist Dr. Karl Menninger. Thus, many famous writers did their best work after severe depressions or nervous breakdowns.

Self-Acceptance

The most valuable and pervasive of all the mind's defenses is belief in self and in life. Psychologists refer to it as

"self-acceptance," the power that enables us to see ourselves realistically and to concentrate on our assets so that we come to like what we see. William James spoke of this power as the "religion of healthy-mindedness." Dr. Menninger calls it an "inner strength," which he feels all people have in varying degrees.

None of this means that we can always sit back and complacently assume that all will go well. Though it is true that the mind has remarkable self-restorative powers, it is sometimes necessary to give those powers help. A person with a serious emotional problem *should* definitely seek professional counsel.

Yet, having looked closely at the self-healing powers of the human mind, I am encouraged to think that our natural and unconscious inclination is to mend ourselves rather than to destroy ourselves. Though a thousand wise and gloomy philosophers have called man a frail, wretched and miserable creature, I prefer to side with the Psalmist, who sang, "I am fearfully and wonderfully made."

1. How convincing do you find the personal proof the writer offers that an ill mind may cure itself?
 2. In what ways are the self-healing mechanisms of the mind similar to those of the body?
 3. Why should a school dropout find this article encouraging?
 4. From your own observation and experience, does emotional growth end at adolescence? Explain.
 5. Do you agree with Freud's view concerning the value of love? with Thomas Carlyle's view on the value of work? Give reasons for thinking as you do.
 6. Under what conditions is forgetting a blessing? Why? Can you give examples from your own life of the self-curing values of forgetting?
 7. How does the mind recondition itself?
 8. What does the writer mean by "psychological antibodies"? Have any gains ever come to you as a result of hurts?
 9. Why is belief in self and in life an important defense of the mind? Rate your own degree of self-acceptance.
 10. Do you agree with the counsel the writer offers in case of a serious emotional problem? Justify your opinion.
-

Condensed from *The Remarkable Self-Healing Powers of the Mind*
The Reader's Digest, February '64 (from Family Weekly)

Are you "in the pink," or does your physical condition need improving? In either case, you'll want to know about the world-wide exercise program known as Aerobics ("with oxygen"). Now the official U.S. Air Force physical-fitness program, the scientifically tested system supplies point charts that measure the amount of energy expended in each exercise. The complete Chart Pack provides charts for all ages, but the Pack accompanying this article contains only charts for young people under 30. Use the charts to help you look better, feel better and live longer. All you need is a watch—and the will to persist.

Key to Fitness— The NEW Aerobics

KENNETH H. COOPER, M.D.

What is Aerobics? Basically, it's a system of exercises which stimulate heart, blood and lung activity for a time period sufficiently long to produce beneficial changes in the body. These changes are called the "training effect." They include a strengthening of the muscles of respiration to facilitate the rapid flow of air in and out of the lungs; a stronger and more efficient heart able to pump more blood and oxygen with each beat; and

toned-up muscles throughout the body.

A few typical Aerobics exercises are walking, running, cycling and swimming. They all contribute to your aerobic capacity, which is defined as the maximum amount of oxygen the body can process within a given time. It is this capacity to effectively deliver more oxygen to all parts of the body that contributes so importantly to overall health and a sense of well-being.

A Sort of Life Insurance

Thus one of the main reasons for the surging popularity of Aerobics is that it provides a sort of life insurance. There is no doubt that, practiced according to the charts and rules, it can have a significant preventive effect on some of our major health problems.

For example, it could be an effective countermeasure to the nation's No. 1 killer, heart disease. Every year, nearly a million Americans die of heart and blood-vessel disease, and millions more are crippled by heart attacks. The Aerobics program, by strengthening the heart and opening up more blood vessels in the muscle tissues, lessens one's chances of prematurely developing coronary heart disease or related vascular ailments.

Scoring Points

Aerobics is the first large-scale, long-range scientific attempt to set specific values on the effect of exercise—and to answer the intriguing questions of what kind, how often and how much is required.

The unique merit of the Aer-

obics system lies in the point charts. (See the Chart Pack, beginning on page 27.) The goal for men is 30 points a week, for women 20 to 24 points a week. This point system has been worked out in the laboratory, using elaborate, expensive equipment. All that you will need, however, is a watch.

The point value assigned to each exercise indicates the amount of oxygen consumed by the body doing a specific activity in a specified time. More points mean more energy expended—that is, more oxygen burned in the body at a faster rate. Thus, if you run a mile in 11 minutes, 30 seconds, you earn three points; run a mile in 8:30, and you earn four points.

Because the point charts let you measure the amount of energy you expend, you can now take exercise in progressive doses. This is vitally important. The body must *gradually* adjust itself to increasing amounts of exercise. That's why the conditioning charts spell out exact exercise rations from week to week.

There's no way of getting around the 30-point target for

men, incidentally, no matter what a person's age may be. The mark was established only after testing thousands of men.

The reason for the 20-24 point target level for women is that young women are somewhat immune to heart disease. Thus they do not share man's need for Aerobics as a basic life preserver. For younger women, 20 points a week should be enough.

Beauty Secrets

Some of the WAFs in the Air Force Aerobics test project were reluctant to take part in the daily workouts that I supervised; they considered running "unladylike." When they began to see and feel the results of the program, however, most of them became enthusiastic.

The fact is that exercise is far more than just preventive medicine for women. Because it changes a person both physically and mentally, exercise directly affects those factors of physique and personality that are the secret of feminine charm and beauty. It involves such things as posture, gait, coordination and grace, as well as the glow that springs from

fitness, alertness and assurance.

Whether one is fat or slim, young or old, there are certain precautions that all participants in Aerobics should follow. A thorough physical examination is first. Before you embark on Aerobics or any other vigorous exercise program, you *must* have your doctor's approval.

Walking can be recommended to almost everyone, but the more vigorous exercises—notably jogging and running—are strictly prohibited to those suffering from certain heart diseases, diabetes or excessive overweight.

Before starting the Aerobics program, you should also classify yourself into one of two categories. Either you are in good physical condition and want to stay that way; or you are in poor condition and want to do something about it. The rules for the two conditions are different.

Fit?

If you have been exercising regularly—at least three times a week for a period of six weeks—and have been given the necessary medical clearance for your age, you may

determine your level of fitness by taking a simple 12-minute field test. (See Chart Pack on page 29.) Do *not* take the field test unless these requirements are met.

In the 12-minute test, you run and walk as far as you can in that amount of time. If you get winded, slow down until you get your breath back; walk for a while. Then run again for a stretch. If you have no measured stretch to run, mark the spot you reach in 12 minutes and check the distance on a car's odometer. Then, to establish your fitness category, simply look for that distance on the 12-Minute Test chart under the appropriate column for your sex.

If you "pass" this test, by reaching either Category IV or V, proceed directly to pages 30, 31 and 32 of the Chart Pack, and follow one of the exercise programs appearing there, using the charts for Fitness Category IV or V.

Unfit?

If you have not been exercising regularly—that is, at least three times a week for a minimum of six weeks—or if you reached

only Fitness Category I, II or III on the 12-minute test, pick the exercise you wish to follow and begin the Starter Program in the Chart Pack. After following one of the Starter Programs for six weeks, continue the Fitness Category I conditioning program for a full 16 weeks.

If you want to speed up your conditioning, take the 12-minute test after six weeks of the appropriate Starter Program and see what category you have achieved. Then follow the charts designed for your fitness category. When you reach the 24- or 30-point per-week level, take for granted that you're in good condition and keep it up.

Tips

In setting up your own exercise program, a few additional tips and rules may prove helpful. Most important, never get ahead of yourself—or of the charts. You should reach the time goals listed for each week of the conditioning program at the *end* of that week. If you try to do too much, too soon, you may exceed your endurance capacity.

Warming up properly is also essential. Any athlete knows

that the body doesn't spring suddenly into high gear from a state of rest. Gentle calisthenics (which are excellent for coordination and muscle-building, but do little to increase the body's oxygen capacity and heart strength) are an excellent way to warm up.

Few people realize that the body also needs a cooling-down period after exercise. Five minutes of walking or very slow jogging eases the transition between the two. Also, wait until you cool down and stop sweating before you shower.

Avoid pushing yourself to the point where you are overly fatigued. Such intense effort at the outset of an exercise program is not only dangerous; it also defeats your purpose. Instead of feeling fit and vigorous, you are likely to feel plain tired.

The charts that follow in the Chart Pack contain complete conditioning programs for three of the most practical Aerobics exercises—walking, running and stationary running. The running program is easy, inexpensive and unquestionably the most productive in

terms of aerobic benefits. But the "unconditioned" must walk before they run, and the charts beginning on page 30 cover this excellent starting program.

Many persons have little chance for outdoor exercise. Others hesitate to run in the street. ("People gawk at me!" complains a Baltimore housewife who tried jogging around her neighborhood.) Also, our metropolitan areas suffer a drastic shortage of safe, usable parkland. And, of course, the weather sometimes makes it impossible to exercise outdoors. So, we include one indoor exercise—running in place. Some people do this in front of the TV set, others in time to music. There are some jogging records on the market which can be used to abet a stationary running program.

This is not to say that a number of other exercises such as cycling and swimming (See charts on pages 33 and 34) cannot be used effectively in an Aerobics program. But they do require facilities or equipment. There are also some excellent home-exercise devices. But all too often, it seems to me, these are used for a short time and

then stored. To practice Aerobics, you don't need equipment of any kind.

So, choose one of the exercises shown on the charts and begin—and then stick to it.

One of the results of reaching the proper point goal and

staying there is a reduced heart rate. There is no medical evidence that a person has a fixed number of heartbeats per lifetime. Yet a slower rate is definitely less work for the heart. It's worth thinking about. Get going—and good luck.

-
1. Define the word aerobics. What is aerobic capacity?
 2. What is the key to endurance fitness—that is, the ability to do prolonged work without fatigue? Why is it the key?
 3. How do aerobic exercises strengthen the heart? the lungs? the muscles?
 4. Does the heart of a person in good condition beat more or fewer times per minute than the heart of a person in poor condition? Why?
 5. What is the value of isometric exercises? isotonic exercises? Compare their value with that of Aerobics.
 6. In exercising, why are warming-up periods essential? cooling-off periods?
 7. Do you agree with the writer that it is advisable to have your doctor's permission before undertaking a program of strenuous exercise? Explain.
 8. Evaluate the importance of exercise for a vital, happy life. What, if anything, do you intend to do about Aerobics?
 9. Speculate about the possibility of using Aerobics to raise the general fitness level of the entire population. How could it be done? What could be the results in group and individual achievement? attitudes? appearance?
-

Condensed from *How to Feel Fit at Any Age*
and *Key to Fitness at Any Age—The New Aerobics*
The Reader's Digest, March '68 and '70 (from *Aerobics* and *The New Aerobics*)

The Aerobics Chart Pack



*A precise guide for young people
under 30 years of age to point values
for Aerobic exercise programs*

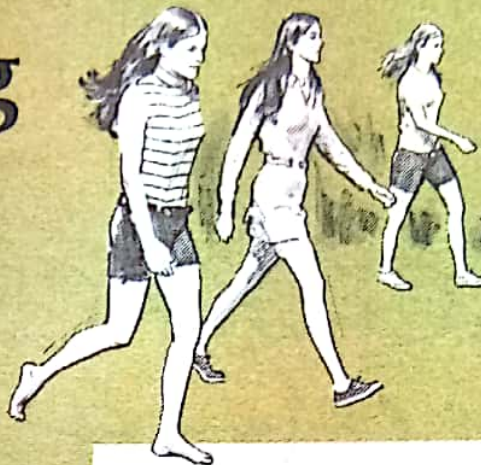
12-MINUTE TEST

*Distances, running and walking,
in miles covered in 12 minutes*

Fitness Category	Age (Yrs.) Under 30
I. Very Poor	<1.0 < .95
II. Poor	1.0 -1.24 .95-1.14
III. Fair	1.25-1.49 1.15-1.34
IV. Good	1.50-1.74 1.35-1.64
V. Excellent	1.75+ 1.65+

*(The distances in color are for women)
< Means less than*

Walking



STARTER PROGRAM

Under 30 years of age

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
1 ... 1	...	15	...	5
2 ... 1	...	14	...	10
3 ... 1	...	13 $\frac{3}{4}$...	10
4 ... 1.5	...	21 $\frac{1}{2}$...	15
5 ... 1.5	...	21	...	15
6 ... 1.5	...	20 $\frac{1}{2}$...	15

Fitness Category I

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	2	28	5	20
8	2	27 $\frac{3}{4}$	5	20
9	2	27 $\frac{1}{2}$	5	20
10	2	27 $\frac{1}{2}$	3}	22
	& 2.5	33 $\frac{3}{4}$	2}	
11	2	27 $\frac{1}{2}$	3}	22
	& 2.5	33 $\frac{1}{2}$	2}	
12	2.5	33 $\frac{1}{4}$	4}	26
	& 3	41 $\frac{1}{2}$	1}	
13	2.5	33 $\frac{1}{4}$	3}	27
	& 3	41 $\frac{1}{4}$	2}	
14	2.5	33	3}	27
	& 3	40	2}	
15	3	41	5	30
16	4	55	4	32

Fitness Category II

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	2	27 $\frac{1}{2}$	5	20
8	2	27 $\frac{1}{2}$	3}	22
	& 2.5	33 $\frac{3}{4}$	2}	
9	2	27 $\frac{1}{2}$	3}	22
	& 2.5	33 $\frac{1}{2}$	2}	
10	2.5	33 $\frac{1}{4}$	3}	27
	& 3	41 $\frac{1}{4}$	2}	
11	2.5	33	3}	27
	& 3	40	2}	
12	3	41	5	30
13	4	55	4	32

Fitness Category III

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	2.5	33 $\frac{1}{4}$	4}	26
	& 3	41 $\frac{1}{2}$	1}	
8	2.5	33	3}	27
	& 3	40	2}	
9	3	41	5	30
10	4	55	4	32

Fitness Maintenance Program

If you scored in Fitness Category IV or V on the 12-minute test, or if you have achieved the 30-points-a-week level in one of the other Fitness Categories, your fitness level is now "satisfactory." To maintain satisfactory fitness, the only requirement is to continue one of the following exercise programs.

WALKING PROGRAMS FOR CATEGORIES IV AND V

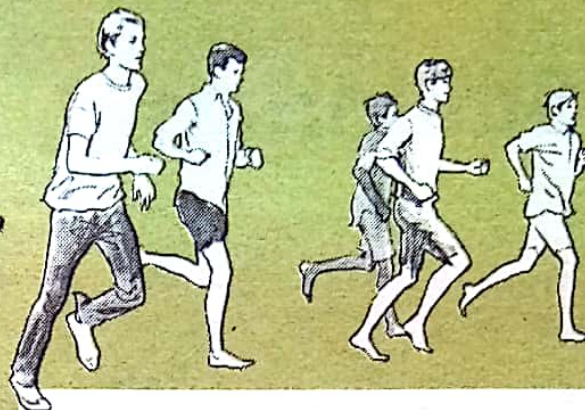
Distance (miles)	Time (min) Requirement	Freq/ wk	Points/ wk
2	24-29	8	32
or 3	36-43 $\frac{1}{2}$	5	30
or 4	48-58	4	32
or 5	60-72 $\frac{1}{2}$	3	30

Running

31

STARTER PROGRAM Under 30 years of age

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
1	1	13 1/2	5	10
2	1	13	5	10
3	1	12 3/4	5	10
4	1	11 3/4	5	15
5	1	11	5	15
6	1	10 1/2	5	15



Fitness Category I

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	1	9 3/4	5	20
8	1	9 1/2	5	20
9	1	9 1/4	5	20
10	1	9	3	21
	& 1.5	16	2	
11	1	8 3/4	3	21
	& 1.5	15	2	
12	1	8 1/2	3	24
	& 1.5	14	2	
13	1	8 1/4	3	24
	& 1.5	13 1/2	2	
14	1	8	3	27
	& 1.5	13	2	
15	1	7 3/4	2	30
	& 1.5	12 1/2	2	
	& 2	18	1	
16	1.5	12	2	31
	& 2	17	2	

Fitness Category II

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	1	9 1/4	5	20
8	1	9	3	21
	& 1.5	16	2	
10	1	8 1/4	3	24
	& 1.5	13 1/2	2	
11	1	8	3	27
	& 1.5	13	2	
12	1	7 3/4	2	30
	& 1.5	12 1/2	2	
	& 2	18	1	
13	1.5	12	2	31
	& 2	17	2	

Fitness Category III

Week	Distance (miles)	Time (min)	Freq/ wk	Points/ wk
7	1	8 1/2	3	24
	& 1.5	14	2	
8	1	8	3	27
	& 1.5	13	2	
9	1	7 3/4	2	30
	& 1.5	12 1/2	2	
	& 2	18	1	
10	1.5	12	2	31
	& 2	17	2	

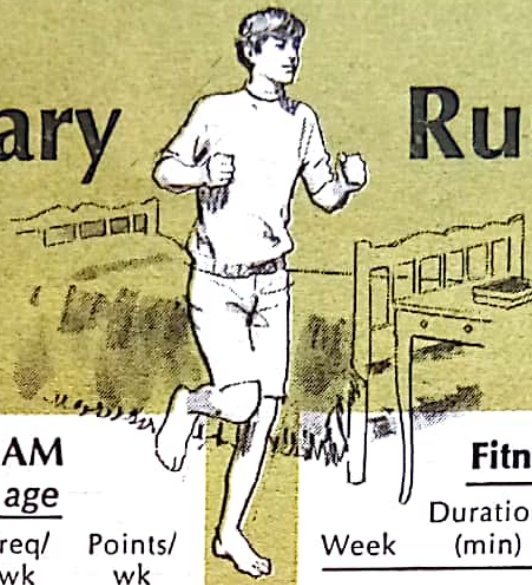
Fitness Maintenance Program

If you scored in Fitness Category IV or V on the 12-minute test, or if you have achieved the 30-points-a-week level in one of the other Fitness Categories, your fitness level is now "satisfactory." To maintain satisfactory fitness, the only requirement is to continue one of the following exercise programs.

RUNNING PROGRAMS FOR CATEGORIES IV AND V

Distance (miles)	Time (min) Requirement	Freq/ wk	Points/ wk
1	6 1/2 - 8	6	30
or 1.5	12 - 15	5	30
or 1.5	9 3/4 - 12	4	30
or 2	16 - 20	4	32
or 2	13 - 16	3	30

Stationary Running



STARTER PROGRAM Under 30 years of age

Week	Duration (min)	Steps † (min)	Freq/ wk	Points/ wk
1	2½	70-80	5	4
2	5	70-80	5	7½
3	5	70-80	5	7½
4	7½	70-80	5	11¼
5	7½	70-80	5	11¼
6	10	70-80	5	15

Fitness Category III

Week	Duration (min)	Steps † (min)	Freq/ wk	Points/ wk
7	10 & 17½	80-90	1	25
		70-80	4	
8	12½ & 15	80-90	2	28
		80-90	3	
9	15	80-90	5	30
10	15	90-100	4	30

Fitness Category I

Week	Duration (min)	Steps † (min)	Freq/ wk	Points/ wk
7	10	70-80	5	15
8	12½	70-80	5	18¾
9	12½	70-80	5	18¾
10	15	70-80	5	22½
11	15	70-80	5	22½
12	10 & 17½	80-90	1	25
		70-80	4	
13	12½ & 15	80-90	3	27
		80-90	2	
14	12½ & 15	80-90	3	28
		80-90	3	
15	15	80-90	5	30
16	15	90-100	4	30

Fitness Maintenance Program

If you scored in Fitness Category IV or V on the 12-minute test, or if you have achieved the 30-points-a-week level in one of the other Fitness Categories, your fitness level is now "satisfactory." To maintain satisfactory fitness, the only requirement is to continue one of the following exercise programs.

Fitness Category II

Week	Duration (min)	Steps † (min)	Freq/ wk	Points/ wk
7	12½	70-80	5	18¾
8	15	70-80	5	22½
9	15	70-80	5	22½
10	12½ & 15	80-90	3	27
		80-90	2	
11	12½ & 15	80-90	2	28
		80-90	3	
12	15	80-90	5	30
13	15	90-100	4	30

STATIONARY RUNNING—PROGRAMS FOR CATEGORIES IV AND V

Duration (min)	Steps † (min)	Freq/ wk	Points/ wk
10 in AM & 10 in PM	70-80	5	30
or 15	70-80	7	30
or 15	80-90	5	30
or 20	80-90	4	32

Swimming

(Overhand Crawl)*

33



CATEGORY			DISTANCE	TIME	TIMES	POINTS
I	II	III	(YARDS)	(MINS.)	A WEEK	A WEEK
WEEKS						
1st	1st	-----	100	2:30	5	6
2nd	-----	-----	150	3	5	7½
3rd	2nd	1st	200	4	5	7½
4th	3rd	-----	250	5:30	5	10
5th	4th	2nd	250	5	5	10
6th	5th	3rd	300	6	5	12½
7th	6th	-----	300	6	5	12½
8th	-----	4th	400	8:30	5	17½
9th	7th	5th	400	8:30	5	17½
10th	8th	-----	{400, 8	2}	19	
			{500, 10:30	3}		
11th	9th	6th	{400, 8	2}	22	
			{600, 12:30	3}		
12th	-----	7th	{500, 10:30	3}	24	
			{700, 15:30	2}		
13th	10th	-----	{600, 12:30	3}	25	
			{800, 16:30	2}		
14th	11th	8th	{600, 12:30	2}	29½	
			{800, 16	3}		
15th	12th	9th	700	15	5	30
16th	13th	10th	1000	20:30	4	34

To maintain fitness after completion of conditioning program, follow any one of these alternatives:

500	8-12	8	32
600	10-15	6	30
800	13-20	5	32
1000	17-25	4	34

*Breaststroke is less demanding, and so is backstroke. Butterfly is considerably more demanding.

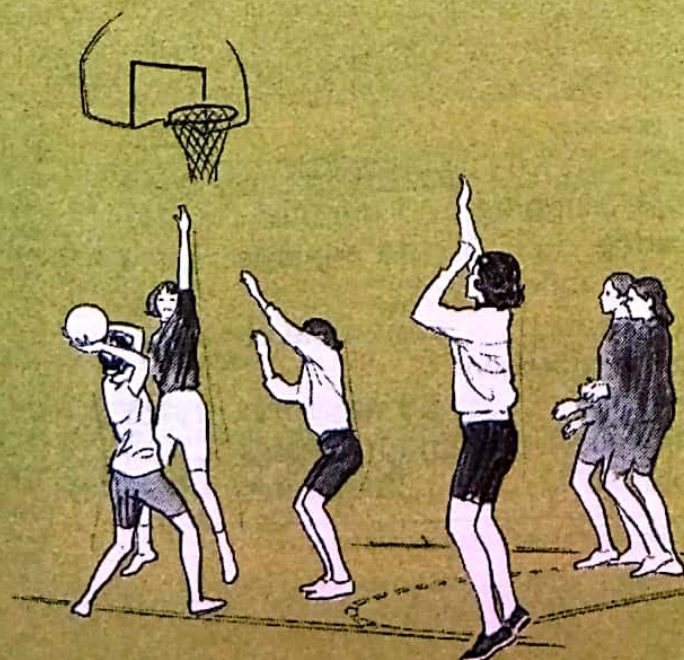
Handball, Basketball, Squash

CATEGORY			DURATION	TIMES	POINTS
I	II	III	(MINS.) *	A WEEK	A WEEK
WEEKS					
1st	1st	-----	10	5	7½
2nd	-----	-----	15	5	11¼
3rd	2nd	1st	15	5	11¼
4th	3rd	-----	20	5	15
5th	4th	2nd	20	5	15
6th	5th	3rd	20	5	15
7th	6th	-----	30	5	22½
8th	-----	4th	30	5	22½
9th	7th	5th	30	5	22½
10th	8th	-----	35	5	26¼
11th	9th	6th	35	5	26¼
12th	-----	7th	{35, 3}	27¼	
			{40, 2}		
13th	10th	-----	{35, 3}	27¼	
			{40, 2}		
14th	11th	8th	{30, 2}	29¼	
			{45, 3}		
15th	12th	9th	40	5	30
16th	13th	10th	50	4	30

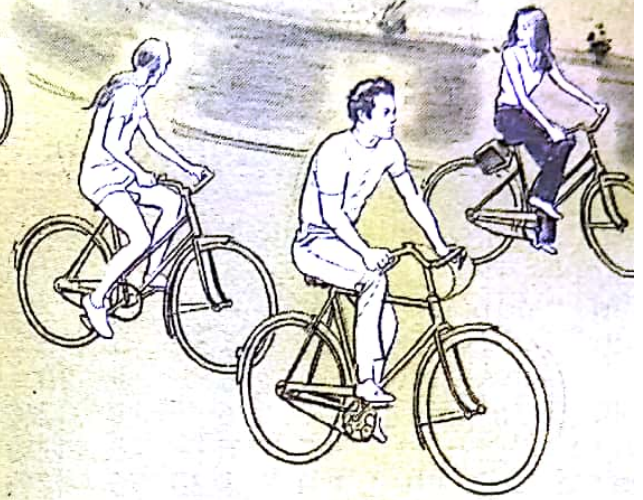
To maintain fitness after completion of conditioning program, follow any one of these alternatives:

40	5	30
50	4	30
70	3	30

*Continuous exercise. Do not include breaks or time outs.



Cycling*



CATEGORY			DISTANCE	TIME	TIMES	POINTS
I	II	III	(MILES)	(MINS.)	A WEEK	A WEEK
WEEKS						
1st	1st	-----	2	7:45	5	10
2nd	-----	-----	2	6:45	5	10
3rd	2nd	1st	2	6:15	5	10
4th	3rd	-----	3	11	5	15
5th	4th	2nd	3	10	5	15
6th	5th	3rd	3	9:15	5	15
7th	6th	-----	4	15	5	20
8th	-----	4th	4	13:30	5	20
9th	7th	5th	4	12:30	5	20
10th	8th	-----	{ 4,	12:30	4 }	21
			{ 5,	16:30	1 }	
11th	9th	6th	{ 4,	12:30	3 }	22
			{ 5,	16	2 }	
12th	-----	7th	{ 4,	12:15	3 }	24
			{ 6,	19	2 }	
13th	10th	-----	{ 4,	12:05	3 }	24
			{ 6,	18:30	2 }	
14th	11th	8th	{ 5,	15:30	3 }	27
			{ 6,	18:30	2 }	
15th	12th	9th	6	19	5	30
16th	13th	10th	8	25:30	4	32
To maintain fitness after completion of conditioning program, follow any one of these alternatives:			5	15-20	6	30
			6	18-24	5	30
			8	24-32	4	32
			10	30-40	3	30

*The points are based on use of an American single-speed bike, following an equal uphill and downhill course, equal time with and against the wind. For a one-way course constantly against a wind exceeding 5 m.p.h., add 1/2 point per mile. If using a racing bicycle use the highest gear as much as possible and deduct 1/2 point per mile.

Point Values for Other Activities

		POINTS*
Golf	18 holes	3
Rope Skipping ..	5 minutes	1 1/2
Skating	15 minutes	1
(ice or roller)		
Skiing	30 minutes	3
(snow or water)		
Tennis	1 set	1 1/2
Volleyball	15 minutes	1
Football	30 minutes	3

*BASED ON CALORIC REQUIREMENTS

How Do You Measure Up?

SIT-UPS



START: Pupil lies on back, hands behind neck, while another pupil holds his ankles.

ACTION: Sit up, turn trunk to left, touch right elbow to left knee, return to starting position. Sit up again, turn trunk to right, touch left elbow to right knee, return to starting point. Repeat, not to exceed number of times shown as "excellent" for pupil's age and skill.

NUMBER OF SIT-UPS—BOYS

Age:	10	11	12	13	14	15	16	17
Excellent	60	67	78	73	99	99	99	99
Good	47	50	51	54	60	60	73	63
Satisfactory	30	31	37	40	44	45	50	50
Poor	22	23	28	30	33	35	40	38

NUMBER OF SIT-UPS—GIRLS

Age:	10	11	12	13	14	15	16	17
Excellent	50	50	50	50	49	37	40	42
Good	33	34	30	30	28	26	27	25
Satisfactory	22	25	22	21	20	20	21	20
Poor	15	18	17	17	15	15	16	15

STANDING BROAD JUMP



START: Pupil stands with feet comfortably apart, toes just behind take-off line. Before jumping, flex knees and swing arms back and forth in rhythmical motion.

ACTION: Jump, swinging arms forcefully forward and upward, taking off from balls of the feet. Allow three trials, record the best mark.

SPAN OF JUMP—BOYS

Age:	10	11	12	13	14	15	16	17
Excellent	5'-6"	5'-10"	6'-2"	6'-8"	7'-2"	7'-8"	8'-0"	8'-4"
Good	5'-0"	5'-4"	5'-8"	6'-0"	6'-7"	7'-0"	7'-3"	7'-8"
Satisfactory	4'-8"	5'-0"	5'-4"	5'-8"	6'-1"	6'-5"	6'-11"	7'-2"
Poor	4'-4"	4'-7"	4'-11"	5'-2"	5'-7"	5'-11"	6'-4"	6'-8"

SPAN OF JUMP—GIRLS

Age:	10	11	12	13	14	15	16	17
Excellent	5'-4"	5'-7"	5'-8"	5'-9"	6'-0"	6'-2"	6'-5"	6'-6"
Good	4'-10"	5'-0"	5'-2"	5'-4"	5'-6"	5'-6"	5'-8"	5'-10"
Satisfactory	4'-5"	4'-8"	4'-9"	4'-11"	5'-0"	5'-0"	5'-2"	5'-3"
Poor	4'-1"	4'-3"	4'-5"	4'-6"	4'-7"	4'-8"	4'-10"	4'-10"

PULL-UPS—Boys



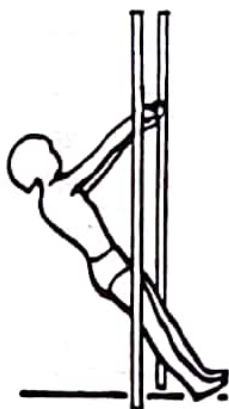
START: Grasp a bar, of sufficient height, with palms facing forward. Hang with arms and legs extended, feet free of floor.

ACTION: Pull body up with arms until chin is placed over the bar; lower body until elbows are fully extended. Repeat as many times as possible. Knees must not be raised; kicking or swinging the body not permitted.

NUMBER OF PULL-UPS

Age:	10	11	12	13	14	15	16	17
Excellent	6	6	7	8	10	10	12	13
Good	3	4	4	5	6	7	9	10
Satisfactory	2	2	2	3	4	5	6	7
Poor	1	1	1	2	2	2	3	4

MODIFIED PULL-UPS—Girls



START: Adjust height of bar to chest level. Grasp bar with palms facing out. Extend legs under bar, keeping body and knees straight, heels on floor, arms extended to form 90-degree angle with body line.

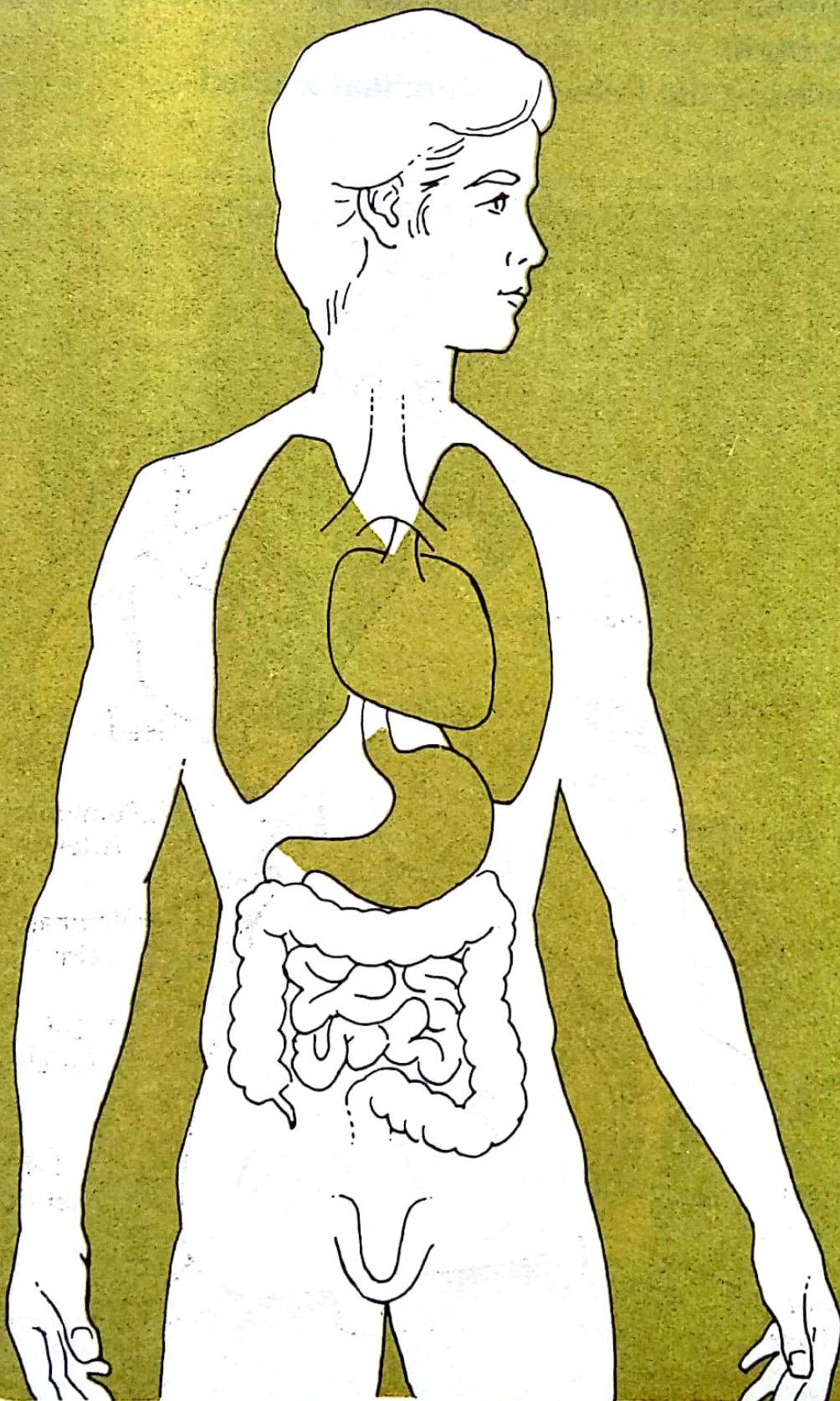
ACTION: Pull body up until chest touches bar, lower body until elbows are fully extended. Repeat, attempting to reach "excellent" score for age, but not exceeding that number.

NUMBER OF MODIFIED PULL-UPS

Age:	10	11	12	13	14	15	16	17
Excellent	45	45	45	45	45	45	45	45
Good	40	40	40	40	40	40	40	40
Satisfactory	30	30	29	30	29	22	25	25
Poor	17	20	20	20	19	12	14	15

Reprinted from *Our Human Body—Its Wonders and Its Care*
(from "Youth Physical Fitness" by the President's
Council on Youth Fitness)

INSIDE STORIES

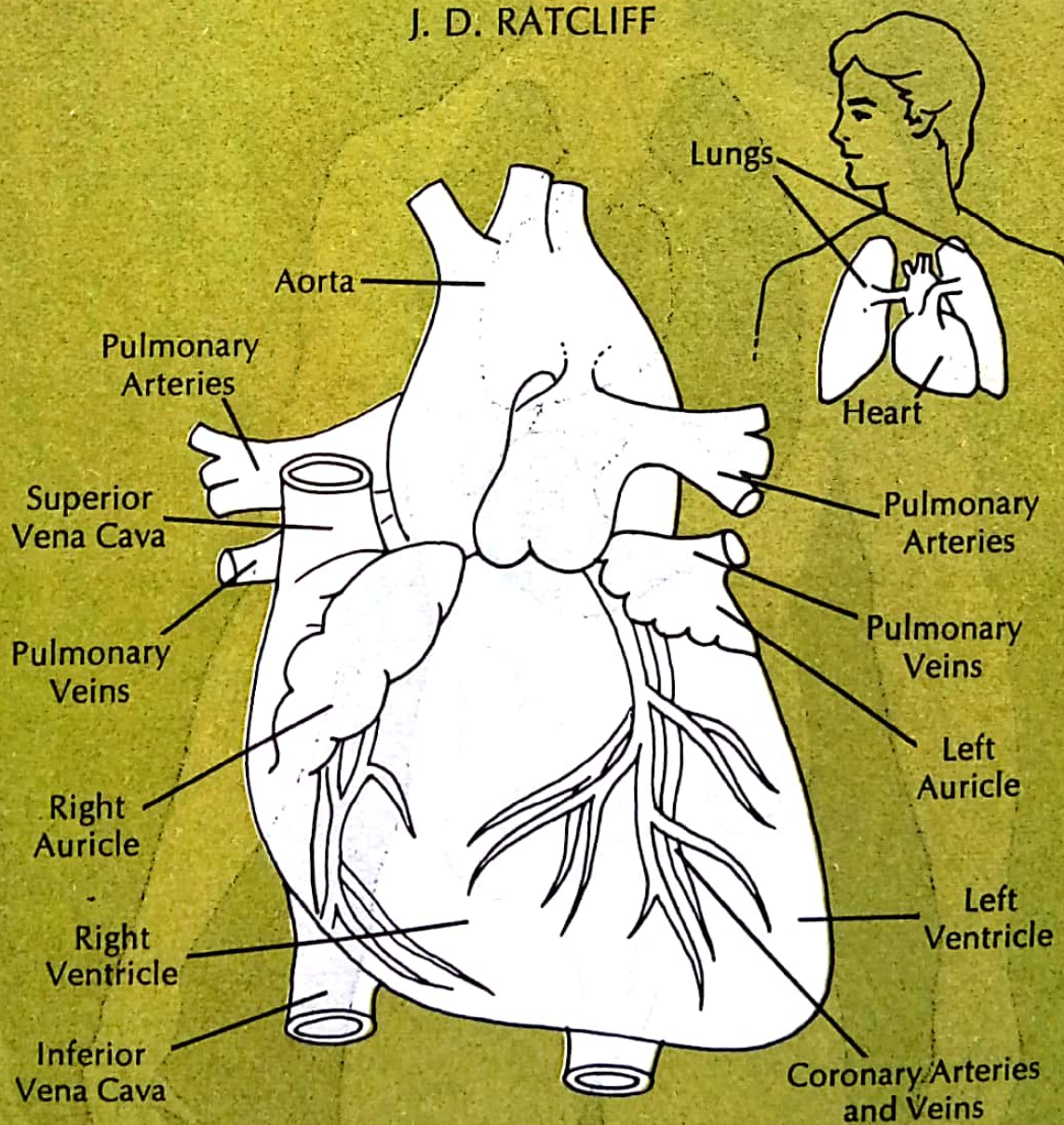


Just how “wonderfully and fearfully” you are made is dramatized in the next three articles. Through Joe’s innards, you can become intimately acquainted with the work and viewpoint of your own heart, stomach and lungs. Writer Ratcliff permits each organ to speak for itself.

First, react to the following story that is titled—

I Am Joe's Heart

J. D. RATCLIFF



I'm certainly no beauty. I weigh 12 ounces, am red-brown in color and have an unimpressive shape. I am the dedicated slave of—well, let's call him Joe. Joe is 45, ruggedly good-looking, has a pretty wife, three children and an excellent job. Joe has it made.

Me? I am Joe's heart. I hang by ligaments in the center of his chest. I am about six inches long and, at my widest point, four inches across—more pear-shaped than Valentine. Whatever you may have heard about me from poets, I am really not a very romantic character. I am just a hardworking four-chambered pump—actually two pumps, one to move blood to the lungs, the other to push it out into the body. Every day, I would say, I pump blood through 60,000 miles of blood vessels. That's enough pumping to fill a 4000-gallon tank car.

When Joe thinks of me at all, he thinks of me as fragile and delicate. Delicate! When so far in his life I have pumped more

than 300,000 tons of blood? I work twice as hard as the leg muscles of a dash runner, or the arm muscles of a heavyweight boxing champ. Let them try to go at my pace and they would turn to jelly in minutes. No muscles in the body are as strong as I am—except those of a woman's uterus as she expels a baby. But uterine muscles don't keep at it day and night for 70 years, as I am expected to do.

That, of course, is a slight exaggeration. I do rest—between beats. It takes about three tenths of a second for my big left ventricle to contract and push blood out into the body. Then I have a rest period of half a second. Also, while Joe sleeps, a large percentage of his capillaries are inactive; this means that I don't have to push blood through them, and my beat slows from a normal 72 down to 55.

Joe almost never thinks of me—which is good. I don't

"Inside information" about the heart is largely based on interviews with three distinguished physicians: Dr. Irvine H. Page of the Cleveland Clinic, Dr. Donald Tapley of Columbia University's College of Physicians and Surgeons and Dr. Irving S. Wright of Cornell University Medical College.

want him to become one of those heart neurotics and worry us *both* into real trouble. When he does worry about me, it is almost always about the wrong things. One night, as he was drifting off to sleep, Joe was listening to my quiet thumping—that's the opening and closing of my valves—and he thought he heard me "skip" a beat. He was quite worried. Was I giving out on him? He needn't have been concerned.

From time to time, my ignition system gets momentarily out of whack—just like the ignition system on Joe's car. I generate my own electricity and send out impulses to trigger contraction. But occasionally I will misfire, piling one beat on top of another. It sounds as if I have "skipped"—but I haven't. Joe would be surprised how often this happens when he isn't listening.

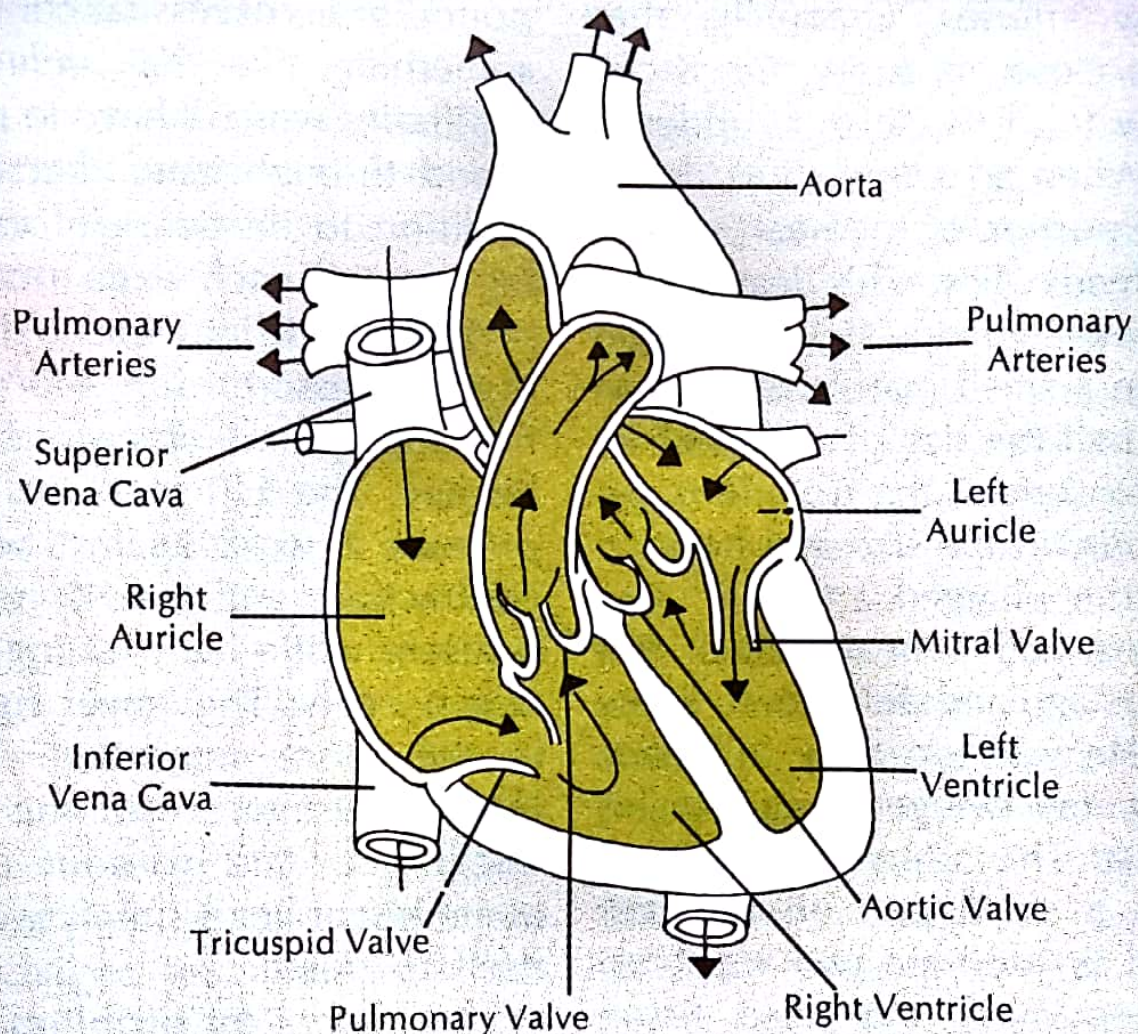
After a nightmare, he sometimes wakes up and worries because I am racing. That's because when he runs for his life in his dreams, I run, too. Joe's worries actually aggravate things—make me go still faster. If he would calm down, so would I. But if he can't, there

is a way to slow me down. The vagus nerves act as a brake. They pass up through the neck—behind the ears, at the hinge of the jaw. Gentle massage here will slow my beat.

Joe blames almost everything on me—fatigue, dizzy spells and such. But I have little to do with his fatigue, and his occasional dizzy spells usually trace to his ears. From time to time, he will be doing desk work and will get a sharp pain in the chest. He fears that he is about to have a heart attack. He needn't worry. That pain comes from his digestive tract—payment for the heavy meal eaten a couple of hours earlier. When I am in trouble, I usually send out a pain signal only after undue exertion or emotion. That's the way I tell him I am not getting enough nourishment to carry the work he is loading on me.

How do I get my nourishment? From the blood, of course. But, although I represent only 1/200 of the body weight, I require about 1/20 of the blood supply. That means I consume about ten times the nourishment required by the

HOW THE HEART VALVES FUNCTION



The blood flows from the body into the right auricle, and from there to the right ventricle. The contraction of the ventricle sends the blood to the lungs. The blood returns to the left auricle and from there goes to the left ventricle. Contraction of the left ventricle propels the blood into the aorta; from there it goes through the body.

body's other organs and tissues.

But I don't extract nourishment from the blood passing through my four chambers. I am fed by my own two coronary arteries—little branching "trees" with trunks not much

larger than soda straws. This is my weak spot. Trouble here is the greatest single cause of death.

No one knows how it happens, but early in life—sometimes even at birth in the hearts

of some Joes—fatty deposits begin to build up in the coronary arteries. Gradually, they can close an artery. Or, a clot may form to close it suddenly.

When an artery shuts down, the portion of the heart muscle it feeds dies. This leaves scar tissue—perhaps it is no larger than a small marble, but it can be half the size of a tennis ball. How serious the trouble is depends on the size and position of the plugged artery.

Joe had a heart attack five years ago and didn't even know it. He was too busy to notice that tiny twinge of pain in his chest. The artery that clogged was a small one on my rear wall. It took me two weeks to sweep away the dead tissue and repave the area with a scar not much larger than a pea.

Joe comes from a family where heart disease has occurred often, so statistics say that I am going to give him trouble, too. Of course, he can't do anything about his heredity. But he can do a lot to minimize risk.

Let's start with overweight. Joe is getting extra padding around the middle and jokes

about his middle-age spread. It's no laughing matter. Every pound of his excess fat contains something like 200 *miles* of capillaries which I have to push blood through. And that is in addition to the work of carrying around each extra pound.

And that brings me to Joe's blood pressure. It's 140/90—the upper limit of normal for his age. The 140 measures the pressure I work against while contracting, and the 90 is the pressure while I am resting between beats. The lower figure is the more important. The higher that figure rises, the less rest I get. And without adequate rest, a heart simply works itself to death.

There are a lot of things Joe could do to get his blood pressure down to safer levels. The first is to get rid of excess poundage. He would be surprised at the drop in blood pressure that would follow.

Smoking is another thing. Joe smokes two packs a day—which means he may be absorbing 80 to 120 milligrams of nicotine every 24 hours. This is pretty violent stuff. It constricts arteries, particularly in the hands and feet, which raises the

pressure against which I must work. It also stimulates *me* so that I beat more rapidly; a cigarette pushes my beat up from a normal 72 into the 80s. Joe tells himself that it is too late to give up smoking—that the damage is done. But, if he could get rid of that constant nicotine stimulation, things would be easier for me.

Joe could give me a break in other ways. He is a competitive, driving, worrying sort of fellow—you know, the successful-businessman type. He doesn't realize that his constant fretting continually stimulates his adrenal glands to produce more adrenaline and noradrenaline. It's the same old story as with nicotine: tightened arteries, higher blood pressure, a faster pace for me.

The point is this: If Joe relaxes, I relax. After all, he doesn't have to be going to a fire all the time. An occasional nap would help. And he might try some light reading instead of that stuff he brings home from the office in his briefcase.

Exercise is another thing. Joe is one of those weekend athletes—who takes it in big doses.

He still likes that rushing-up-to-the-net bit in tennis, as if he were a college boy. When he does this, my work load goes up as high as five times normal.

What Joe *should* be doing is taking regular, mild exercise. A walk of a mile or two a day would help. Climbing a couple of flights of stairs to his office wouldn't hurt either. His office is on the tenth floor, but he could walk up the first two flights, and then catch the elevator. Little things like that would do a lot. As I said, fatty deposits are already beginning to block some of my arteries. This *regular* exercise causes new blood pathways to develop. Then if one artery closes down, there are others to nourish me.

Finally, there is diet. I am not asking Joe to become a diet nut. Just the same, fats seem to play some role in building up that plaque forming in my arteries. Joe gets 45 percent of his calories from fats and, like others in industrialized countries who eat this way, he has a 50-50 chance of dying from clogged arteries.

I wish he could see what happens after a heavy fat meal. Tiny fat globules in the blood seem to glue red blood cells together into a sludgy mess. This is the stuff I must push through capillaries. It's a job.

I'm not the demanding type. I'll do the best I can for Joe

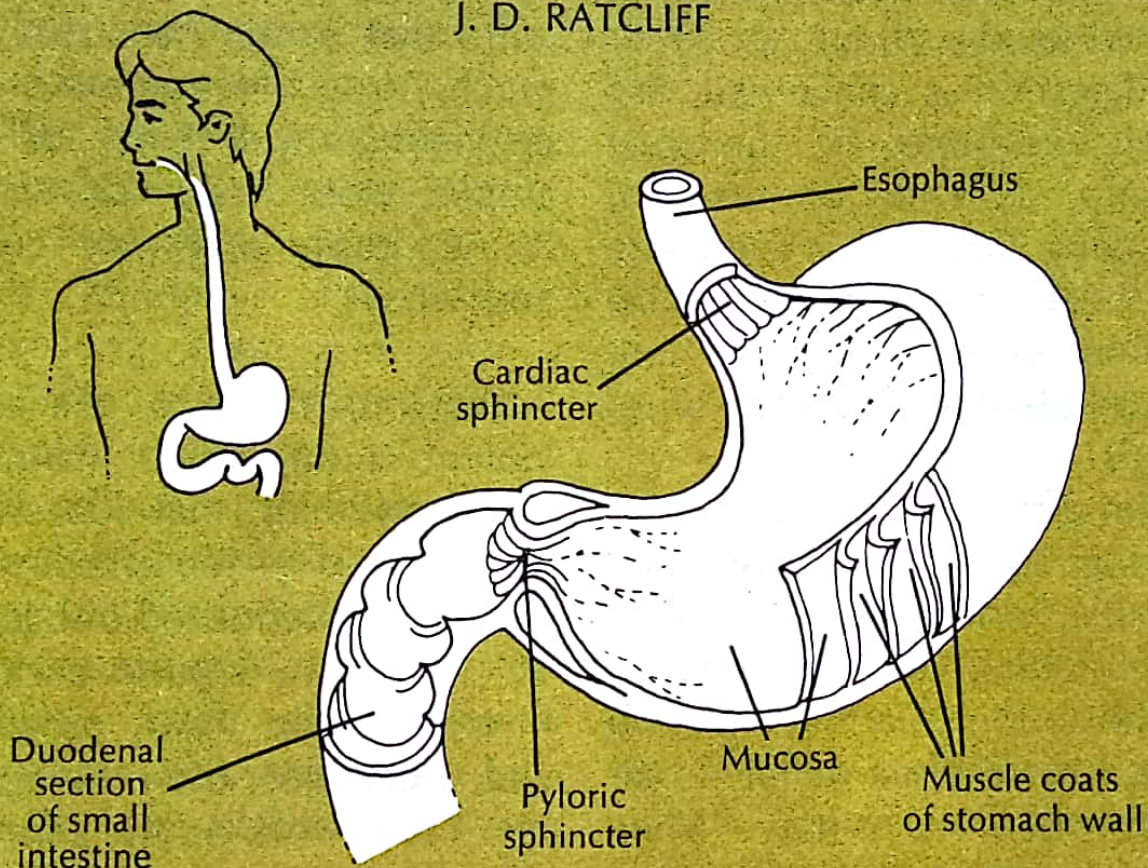
under any circumstances. Just the same there are those breaks he could give me: slim down a bit, take regular exercise, relax a little more, cut down on fats and smoking. If he would only do those things, I could keep on working for Joe for a long time.

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1. What is Joe's attitude toward his heart? What does his heart want it to be? Why?
 2. How does the heart care for itself? Consider its method of racing; skipping; feeding; dealing with heart attacks.
 3. What can Joe—and you—do to make work of the heart easier? Consider diet, weight, exercise, smoking, emotions.
 4. If *your* heart could talk, what do you think it would say to you?
 5. Sum up the most valuable points about care of the heart that you have gained from this article.
 6. Appraise this article critically. How helpful and interesting do you find (1) Mr. Ratcliff's device of having the heart speak for itself? (2) the illustrations on pages 36 and 39?
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Condensed from *I Am Joe's Heart*
The Reader's Digest, April '67

I Am Joe's Stomach

J. D. RATCLIFF



Here's an unusual opportunity to get a firsthand report from what may be the most abused organ in the body. This arresting article is based largely on interviews with Dr. William D. Davis, Jr., of New Orleans' Ochsner Clinic and Tulane University.

Joe, the man I work for, is 45, happily married, hardworking, typical of dozens of your friends. One of my neighbors,

Joe's heart, has told his story. (See page 38.) I am Joe's stomach. Here is *my* story.

Joe frets about me more than

about any other organ in his body. He thinks I am terribly important. Actually, I am mostly just a *convenience*—a food reservoir that permits Joe to get by on three meals a day, instead of the half-dozen or more he would need without me. So far as digestion is concerned, the small intestine is the *real* champ. I work on protein, breaking it down, but even here the final job is done by the intestine, which also takes care of carbohydrates, fats and other foods.

I'm afraid I'm not a very inspiring sight. I'm glossy pink outside. Inside, I look like folds of glistening velvet. Tucked up in the abdomen at the lower rib line, I resemble a deflated balloon when I'm empty. When I'm full, I slant across the body, big at the top, small at bottom, shaped roughly like a bulbous letter J. My capacity is a little under two quarts. Joe's Newfoundland dog can hold three times as much.

Although I am not as important as Joe thinks, I do perform a number of jobs that make life more pleasant for him. My lining contains some 35 million glands which may secrete about

three quarts of gastric juice per day—mainly hydrochloric acid. The acid serves to activate another of my secretions—the enzyme pepsin, which starts protein digestion. Without pepsin, Joe would have a hard time with that steak he loves so much. My glands secrete other enzymes as well. One, for example, clots milk, converting it into easily digestible curds and whey.

Everyone thinks of me as a violent churn, which manhandles everything that Joe swallows. Not so. As Joe eats dinner, the food is deposited one layer at a time: the shrimp cocktail first; then the meat, potatoes and vegetables; then the apple pie. I start work on the shrimps that lie against my wall. My muscular contractions, sweeping wave-like from top to bottom, mix them thoroughly with digestive juices. Pretty soon they are a thick gruel. Gradually, I work this gruel down toward the pyloric valve, which opens into the duodenum, the foot-long first part of the small intestine.

This is a danger spot. If any large amount of gastric juice is

dumped into the duodenum, it eats its way into the wall. That's why this is the commonest site of ulcers. Fortunately for Joe, my pyloric valve lets food through in little squirts—no more than can be instantly neutralized by the normally alkaline duodenum.

The mashed potatoes take me only a few minutes to handle. Meat takes longer, and leafy vegetables still longer. How long? There is enormous variation, and much depends on Joe's mood. But four hours will probably be average for the meal described. If spinach, however, is included, it may stay around as long as 24 hours.

Fatty meals pose special problems. Suppose that at 7 a.m. Joe eats a breakfast of eggs scrambled in butter and cream, bacon and well-buttered toast. This excess of fat triggers the duodenum to produce a hormone which slows my muscular contractions—probably in self-protection. It can't handle such a big load of fat all at once. As a result, when Joe sits down to lunch, I may still be working on as much as a fourth of his breakfast.

Another thing that slows me

is cold. If Joe eats a big dish of ice cream, I can cool down as much as 20 degrees from a normal 99° F., and everything comes to a halt for the half-hour it takes me to warm up again. But no harm is done. After all, I'm in no particular hurry.

In fact, I lead a pretty relaxed life. While liver, heart, lungs and kidneys keep at it 24 hours a day, I can finish my work on a normal dinner by the time Joe goes to bed. So I go to sleep when he does.

A question arises: Since I digest other proteins, why don't I digest *myself*? (After all, I handle tripe quite nicely, and that is cow's stomach.) The reason is that my delicate lining is coated with a protective mucus. Scrape it away, and I turn cannibal.

I have another remarkable attribute: the way I reflect Joe's moods. When his face turns red with anger, I turn red. When he gets pale with fright, I get pale, too. When he gets excited at a football game, I react with vigorous contractions—my secretions may triple in volume. And when Joe smells a chop broiling

or sees delicious-looking pastries in a bakeshop, I go into action. Joe calls these contractions hunger pains, and he just may be right.

I share Joe's depressions, too—my muscular waves all but stop and so does secretion of gastric juice. Out of habit, however, Joe continues to eat. And what he swallows just sits there, causing distension and discomfort. At such times, Joe would do better not to eat at all.

Stressful situations produce a different problem: they hoist acid production, sometimes to the point of causing an ulcer. Whenever Joe feels under stress, he would be wise to shift eating habits. Eating a number of small, light meals is the best way to control excess acid. Actually, Joe had a minor ulcer once, and didn't even know it. This happens to many people. Joe was in college and worried about exams. This shot my acid production up, and the acid finally found a tiny weak spot in the mucus. Joe had a few twinges of pain, attributed them to sketchy eating. But once exams were over, he calmed down, acid secretion dropped, and I got a chance to

pour out mucus and heal my wound.

Aside from ulcers and cancer, very few things ever go seriously wrong with me. I can heal a scratch from a fishbone in 24 hours; on the skin, the same wound might take a week to heal. Put a piece of tainted meat in distilled water, and microbes go merrily to work. Put the same piece of meat in my gastric juices, and many of the microbes perish in quick order. The main things that Joe has to worry about are certain microbes that are resistant to my digestive juices. That's why Joe should watch what he eats when he travels in countries with poor sanitation.

Some things *do* irritate me: pepper, particularly; and, to a lesser degree, mustard and horseradish. I get fiery red and become engorged when these things touch my lining. My acid production is stepped up by coffee, nicotine and alcohol—a couple of martinis may double the secretion. That's why ulcer patients must lay off these things. I'm not asking Joe to give them up, but he could make life pleasanter for me—

and I could do a better job for him—if he would moderate his drinking and smoking. And if he feels he needs all that coffee he could buffer it by using a little cream.

Medicine? Joe loves to take it whether I need it or not. I almost never do. In fact, almost all drugs irritate me. Even in a reasonably healthy stomach like me, too much aspirin, for example, can start little pinpoint hemorrhages. But they're not serious—if the process isn't repeated too often.

Another of Joe's sovereign remedies is bicarbonate of soda for "acid stomach." But I wish he wouldn't overdo it. For soda is rapidly absorbed into the bloodstream. Taken too often, it can lead to alkalosis (far more to be feared than acidosis), which places a fearful burden on the kidneys.

Joe blames me for a lot that I'm not guilty of. Like those embarrassing rumbles his in-nards make from time to time. *That* noise comes from the intestines. I am not a gas generator the way they are. When Joe gets burpy, it is mostly because he has just had a carbonated

drink or because he swallowed air when he gulped his food. If he took his time and chewed properly, this wouldn't happen.

When Joe eats unwisely, or perhaps takes on too much alcohol, I have a familiar means of housecleaning: vomiting. Curiously enough, the signal to get rid of the offending mass doesn't come from me. It comes from the brain and sets a violent chain of events under way. Abdominal and chest muscles put the squeeze on me, and the cardiac valve at the lower end of the esophagus opens wide. You know the rest.

"Heartburn," the hot spot of pain near the breastbone, is something else. If Joe has, say, drunk a little too much beer, the pyloric valve doesn't open properly and I can't empty. He burps up a gas bubble, which rises and carries along some of my irritating hydrochloric acid to the lower gullet. That's what heartburn is—nothing serious.

There's one rule that everyone should follow: If any sharp pain that seems to emanate from me lasts over an hour, call a doctor! Too many people die of heart attacks thinking they are merely stomach upsets. As a

matter of fact, many pains seem to have me as a source, particularly gall bladder pains. So play it safe—discomfort in a normal stomach usually goes away rapidly.

I've been called the most

abused organ in the body—and probably I am. But I'm built for abuse. If Joe will give me a modicum of consideration, I can pretty well promise him a lifetime of trouble-free service. Let any of my neighboring organs match that offer!

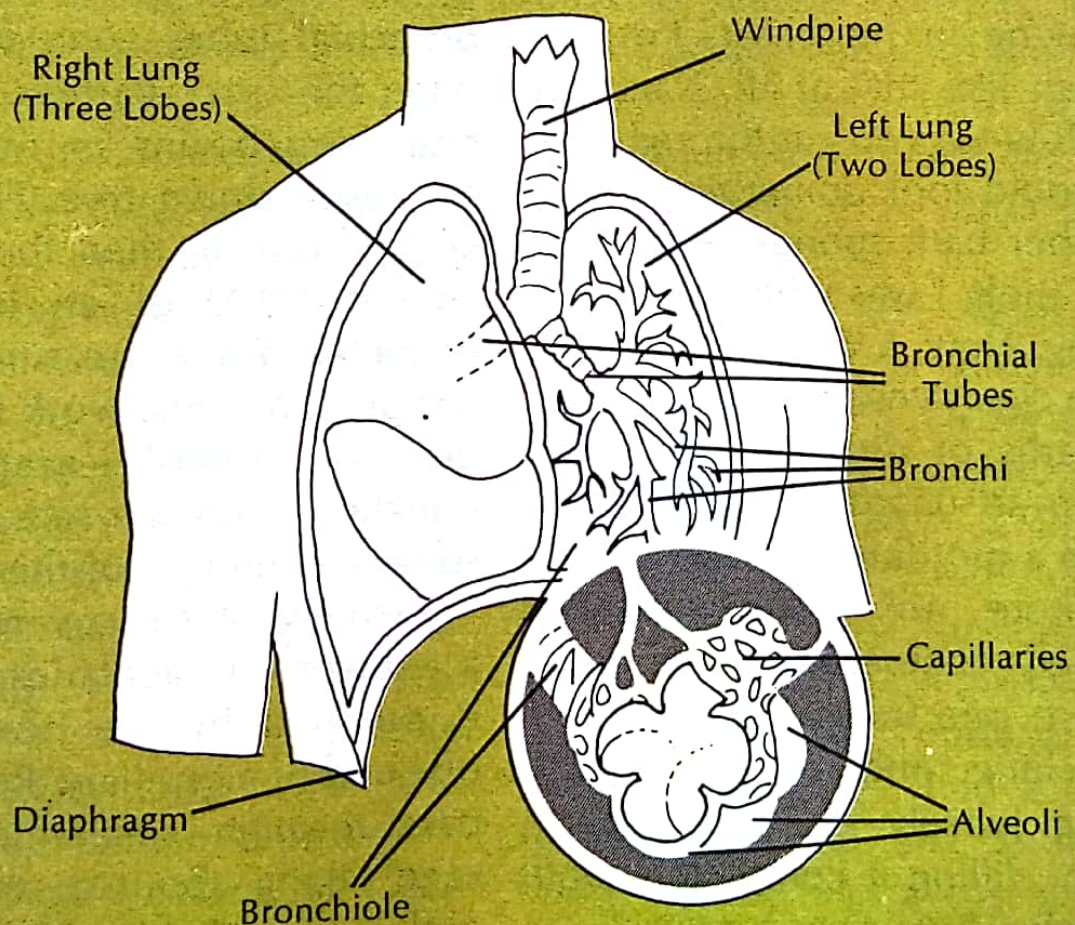
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1. Joe has the usual misconceptions about the work and the importance of the stomach. What are they? Did you share them before you read this article?
 2. Trace the miraculous process of digestion. What is the work of the stomach? the small intestine?
 3. What causes ulcers? What can Joe—and you—do to help prevent them? to help cure them?
 4. In what ways does the stomach reflect Joe's moods? Why is it desirable for you to understand this fact? What responsibility does this knowledge place upon you?
 5. What are the major irritants of the stomach? Do you think you should restrict their use? Explain.
 6. Why does the writer advise everyone to call a doctor if a stomach pain lasts more than an hour?
 7. If your stomach could talk to you, what do you think it would have to say?
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Condensed from *I Am Joe's Stomach*
The Reader's Digest, May '68

Does Joe appreciate the truly remarkable organ that tells about itself in this article? How does he treat this delicate marvel, this "gaseous swap shop," this unique air-conditioning unit? You can get valuable health pointers by absorbing the facts Mr. Ratcliff has assembled—largely from interviews with Drs. Alton Ochsner and Hurst B. Hatch of the world-famed Ochsner Clinic in New Orleans, Louisiana.

I Am Joe's Lung

J. D. RATCLIFF



You know dozens of people like Joe. He is 45, successful, happily married. Joe's heart and stomach have already told their stories. (See pages 38 and 45). Now it's my turn.

I am Joe's right lung, and I claim the privilege of speaking since I am slightly larger than my partner in the left side of Joe's chest. I have three lobes—sections—while the left has only two. Joe would be surprised if he could see me. He thinks of me as a kind of hollow, pink football bladder hanging in his chest. I'm not much like that at all. I am not hollow—if you cut through me, I would look something like a rubber bath sponge. And I am not pink. I was when Joe was a baby. Now, a quarter of a million cigarettes plus half a billion breaths of dirty city air later, I am an unattractive slate-gray with a mottling of black.

There are three separate, sealed compartments in Joe's chest: one for me, one for the left lung, one for his heart. I hang loosely in my compartment, filling it completely, and weigh a little over a pound.

I have no muscles and hence play a passive role in breathing.

There is a slight vacuum in my compartment—so when Joe's chest expands, I expand. When Joe exhales, I collapse. It is simply a recoil mechanism. Let Joe puncture his chest wall in an accident and my vacuum is broken. I'll hang loosely, doing no work, until healing takes place and the vacuum is reestablished.

Take a closer look at my architecture. Joe's four-inch-long windpipe divides at its lower end into two main bronchial tubes—one for me, one for my partner. Then branching begins in me—like an upside-down tree. First the larger bronchi, then the bronchioles $1/100$ of an inch in diameter. These are simply air passages. My real work is done in my alveoli—grape-like bunches of tiny air sacs. I have some 250 million of these sacs.

Each alveolus is covered with a cobweb of capillaries. Blood is pumped by the heart into one end of a capillary. Red cells pass through single-file—passage taking about a second—and a remarkable thing takes place. Through the gossamer membrane of the capillary wall,

the cells diffuse their cargo of carbon dioxide into my alveoli. At the same time, the cells pick up oxygen going the other way. It's a kind of gaseous swap shop—blue blood flowing in one end of the capillary, emerging refreshed and cherry-red at the other.

Joe's more important body organs—notably the heart—are under automatic control. Most of the time this is true of me, too, though I am under voluntary control as well. As a child, Joe had temper tantrums and would sometimes hold his breath until he turned a faint blue. His mother worried—unnecessarily. Long before he got into any real trouble, automatic respiration would take over. He would start breathing whether he wanted to or not.

My automatic breathing control is in the medulla oblongata—the bulge where the spinal cord taps into the brain. It's an amazingly sensitive chemical detector. Laboring muscles burn oxygen rapidly and pour out waste carbon dioxide. As it accumulates, the blood becomes slightly acid. The respiratory control center detects this instantly—and orders me

to work faster. Let the levels rise high enough—as when Joe does heavy exercise—and it orders deeper breathing as well—one's "second wind."

Lying quietly in bed, Joe needs about eight quarts of air a minute. Sitting up requires 16; walking, 24; running, 50. Since Joe is a desk worker, he has no large oxygen demands. Normally, he breathes about 16 times a minute—a pint of air each time. (This only partially inflates me. I can hold eight times as much.) Even so, not all of that one-pint breath reaches me; one third of it shuffles aimlessly in and out of the windpipe and other air passages.

I like my air just about as moist and warm as that in a tropical swamp. Producing this very special air in the space of a few inches is quite a trick. The same tear glands that bathe Joe's eyes, plus other moisture-secreting glands in his nose and throat, produce as much as a pint of fluid a day to humidify my air. Surface blood vessels along the same route—wide open on cold days, closed on warm days—take care of the heating job.

There is an almost endless list of things that can cause me trouble. Each day, Joe breathes in a variety of bacteria and viruses. Lysozyme in the nose and throat, a powerful microbe slayer, destroys most of these. And those that slip into my dark, warm, moist passages—a microbial happy hunting ground—I can usually handle. Phagocytes patrol my passages and simply wrap themselves around invaders and eat them.

Dirty air, of course, is my biggest challenge. Other organs lead sheltered, protected lives, but for all practical purposes I am *outside* Joe's body—exposed to environmental hazards and contaminants. I am really quite delicate, and it's a wonder I am able to survive with such things as sulphur dioxide, benzopyrene, lead, nitrogen dioxide. Since some of them actually melt nylon stockings, you can guess what they do to me.

My air-cleaning process—such as it is—begins with hairs in the nose, which trap large dust particles. Sticky mucus in nose, throat and bronchial passages acts as flypaper to trap finer particles. But the real

cleansing job falls to the cilia. These are microscopic hairs—tens of millions of them—along my air passages. They wave back and forth, like wheat in the wind, about 12 times a second. Their upward thrust sweeps mucus from the lower passages to the throat, where it can be swallowed.

If Joe could watch my cilia under a microscope, he'd see that, if cigarette smoke or badly contaminated air is blown on them, the wind-in-the-wheat-field action stops. A temporary paralysis sets in. Let this irritation continue long enough, and the cilia wither and die, never to be replaced.

After 30 years of smoking, Joe has lost most of his cilia, and mucus-secreting membranes in his air passages have thickened to three times normal size. Joe doesn't know it, but he is in actual danger of drowning. If enough mucus drops down into my air sacs, it halts breathing just as effectively as a lungful of water. One thing saves Joe from this: his noisy, inefficient smoker's cough, which has replaced the quiet efficiency of the cilia. Joe

might remember that it's the only cleaning method left to me—and be cautious about taking cough-suppressing drugs.

A large part of the time, Joe is asking me to breathe real garbage. Some of the particles clog my smaller passages, and some actually sear my tissues. The fragile walls of my alveoli lose elasticity. They don't collapse the way they should when I exhale. (Thus it is possible to breathe *in* but not *out*.) Carbon dioxide is trapped in them, and they can no longer contribute oxygen to the blood or extract waste carbon dioxide. The result is emphysema—a fearsome trial in which each breath represents a fight for survival.

Although Joe doesn't know it, this has already happened to a few million of my alveoli. Since Joe has about eight times the lung capacity he needs for desk work, he still has plenty of reserve. But lately he has noticed that even a little exertion brings on breathlessness. I'm warning him.

Joe should heed the old medical saying, "If you are aware that you have lungs, you are already in trouble," and

take a little better care of me. In the main, this means giving me better air to breathe. The big thing, of course, would be to give up smoking. Short of this, there are other things he can do. There is a small, reasonably priced machine which circulates room air through a thin bed of activated carbon—the stuff used in gas masks—and cleanses this air of chemicals deadly to my tissues. One in Joe's bedroom would give me some eight hours of protection, and another in his office would provide eight more.

A little exercise and more sensible eating would be in order. Any general body exercise—climbing stairs, walking, jogging, sports—forces me to breathe more deeply, which is all to the good. And there are exercises for me alone. Ordinarily, the best breathing is deep breathing—more air at a slower pace. Joe could practice abdominal breathing, the way babies and opera singers do it: not by inflating the chest, but by dropping the diaphragm down. Then air is sucked into even my deepest alveoli.

Joe could also give me a house cleaning a few times

each day. He thinks that with a normal exhalation I'm empty. By no means. Let him blow out all the air he can via his mouth. Then if he will purse his lips, he can do quite a lot more blowing. If he does this while smoking, he will see something that should give him pause: smoke trailing out through his pursed lips that would normally

be left in me to stagnate.

It all adds up to this: Most of my neighbor organs absorb an enormous amount of abuse without complaint. I can't. Nature hasn't equipped me with all the defenses I really need in today's world. That's why a variety of lung diseases have reached epidemic proportions.

Boss Joe, take heed!

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1. What is the real work of the lungs? Why are they a kind of "gaseous swap shop"?
 2. Is breathing under automatic or voluntary control, or both? Is it possible to hold your breath long enough to harm yourself?
 3. Contrast the amount of air needed for lying quietly with the amount needed for various activities such as sitting up, walking, running.
 4. How do the lungs serve as an air-conditioning unit?
 5. What is lysozyme? What are phagocytes? cilia? How is each of benefit?
 6. How do air pollution and smoking affect mucus-secreting membranes? cilia? If Joe keeps on smoking, why is it advisable for him to put up with his smoker's cough?
 7. Joe has already lost a few million alveoli. Why? What warning have his lungs given him? What will happen if he loses most of his alveoli?
 8. In what ways can Joe take better care of his lungs? In what ways can you take better care of YOUR lungs?
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DEAD-END
TRAIL
TO
DYNAMITE
STUFF

Pills, Glue and Kids: An American Tragedy

EARL and ANNE SELBY

Is there a connection between the soaring crime rate in our country and young people's increasing use of drugs? Do we need new laws and new enforcement manpower? Where does the ultimate cure lie? Weigh the writers' answers.

A pretty 17-year-old girl, distraught and pale, sat in a West Coast diagnostic center and told us how drugs had ruined her life. This was no child of the slums. Her father is a professional man, her mother a college graduate. She had lived with her parents in

a quiet, respectable neighborhood. Until her sophomore year in high school, the girl had been an excellent, popular student.

"Then," she said, "I got hooked on bennies (amphetamine stimulant pills). I didn't particularly like taking them,

but my boyfriend was doing it, and I didn't want to be chicken. My marks went down and my



BENNIES

parents began to nag me. So I took off for San Francisco—started taking rainbows (capsules containing a powerful barbiturate)."



RAINBOWS

In San Francisco, the girl's craving for drugs became so great that one night she swallowed a recklessly large dosage of LSD-25—a highly dangerous hallucinogen which has been used experimentally in the treatment of the mentally ill, is now bootlegged widely to teenagers. "That was the worst binge I ever had," the girl told us. "It was like everything was



LSD-25

in stereo, with paint spilling

down in sound, and walls moving in and out. I thought I'd blow my mind. Afterward I had the bends and the sweats for weeks, and I couldn't eat."

A couple of months later, while she was living with a 30-year-old pill peddler, she was arrested. "Now I'm going to the state's security tank for girls for at least a year," the once-lovely child pondered morosely. "Then what? I don't know."

There are no reliable statistics on just how widespread drug addiction is among the young, because only a fraction of those addicted get caught. But we do know that you need only talk with law-enforcement officials in any city to be convinced that a shockingly large number of juvenile crimes are committed by youngsters under the influence of drugs.

Punch-Drunk on Terrible Wares

Most of the teenage addicts we talked with came from unbroken homes in solid, middle-class communities. Some came from families in the higher economic brackets.

Furthermore, officials in

many states have told us how easy it is for youngsters to obtain dangerous drugs. (Enforcement officials make a distinction between the various pills and LSD, which are grouped under the heading of "dangerous drugs," and the true "narcotics" such as heroin.) One 18-year-old addict told us, "You can get pills everywhere: in school, on street corners, in poolrooms." This is as true in many smaller communities as it is in metropolitan areas.

Frequently the pill bootleggers employ youths and even children to help sell their wares. At a correctional camp, we interviewed a sturdy, sandy-haired 17-year-old who had been engaged in this illicit traffic. He was also an addict who had been almost constantly "high" on LSD. Now his speech was as slurred as that of a punch-drunk prizefighter.

"I got picked up the first time when I was 14, for stealing a car," he told us. "I was high on red devils (Seconal capsules), but the cops didn't know it and I was put on probation. By the time I was 15, I was fronting for a local pusher

and made from \$50 to \$100 a week selling pills to the kids.



Then I started taking red devils and bennies together, and I never came down to earth. I was picked up a couple of times for getting in fights. That was when they sent me to the psychiatrist. But it didn't take. I kept right on with the pills."

Finally, someone informed the police, and he was arrested in his own home for the sale and possession of drugs. Asked if his family had not been suspicious about his activities, he said, "I think Mom suspected but she couldn't prove a thing. I was smart about hiding the stuff." As this is written, he still has six months to serve in the correctional camp, and he is worried about what will happen when he gets out. The prognosis isn't good. Medical tests indicate that he may also have suffered permanent brain damage.

Unappetizing Habit

One of the more bizarre aspects of the juvenile drug syndrome is the habit of glue-sniffing. Several years ago, when youngsters first discovered that they could "get a charge" from inhaling the fumes of model-airplane glue, nobody imagined that such an unappetizing habit could become widespread. Today glue is a major source of drug addiction among the kids. It produces hallucinations, euphoria, intoxication, sexual permissiveness and, in many cases, leads to violent behavior.

The glue-sniffing habit, often acquired at an astonishingly tender age (there are records of children as young as seven being addicted), can do great physical damage. Medical tests on glue-sniffing youngsters reveal liver, kidney and lung damage, and abnormalities of the blood that often lead to anemia. Glue-sniffing may even result in death.

Police records are full of the violence and crime committed by juvenile glue addicts. Car theft and rape are common

among this group. In a northern California correctional camp, we talked with a boy we shall call Joe, now 18 years old. He began sniffing glue at 14, because he wanted to be "with the *in* crowd." At 17, he and another boy, both under the influence of pills, beat a youth into unconsciousness, drove him 50 miles and dumped him outside a hospital entrance. Joe was convicted on a kidnapping charge and is still serving his sentence.

Like all the other juvenile addicts we talked with, Joe was doubtful that he could stay away from drugs after he leaves the camp. "You start on the glue kick and you get to like it," he said. "Then you want a bigger kick. You begin taking pills and you like them even better."

In still another correctional hall, we met a tragic kid we'll call Mary. She was 16 and worried that she might have contracted gonorrhea when she had been raped while she was high on glue. "I know I never should have started on glue," she told us, "but the other kids were doing it and it sounded like

fun. At first, I sniffed just occasionally for kicks. Then pretty soon I couldn't stay away from the stuff."

Many large cities have adopted ordinances banning the sale of certain kinds of glue to juveniles. But the new laws haven't stopped the traffic. Cynical shopkeepers say to a beardless youth, "You're over 21, of course," and then hand him the glue.

Blue Heavens at 13

Not only are more and more dangerous pills finding their way into illicit traffic; large quantities of pills are being manufactured *illegally* for the bootleg market. Police officials will tell you that the kids are the largest market for these bootlegged drugs.

Listen to Sergeant Eugene Zappey, head of the Los Angeles juvenile narcotics squad: "Not a day goes by that we don't pick up kids for sniffing glue or taking pills. When we ask the parents what they know about these activities, almost invariably they react with shocked surprise. They are as-

tonished that the police would even think that their youngsters were fooling around with dangerous drugs."

Sergeant Zappey's words are underscored by dozens of other police officials. The men have seen a great deal of the seamy side of life, but without exception they are shocked by the rising tide of juvenile drug addiction.

"Just recently," Sergeant Zappey continued, "a 13-year-old boy died from an overdose of drugs. A local pusher had dropped him off at the emergency entrance of a hospital. At first it was thought that the boy had died of natural causes, but an autopsy proved that drug poisoning had caused his death. He had ingested 14 blue heavens (Amytal capsules) and 12 reds (Seconals) shortly before he died."



Linked with juvenile drug addiction is the horrifying increase in automobile accidents among the younger set. Captain Joseph J. Healy, head of

the Illinois Narcotics Control Agency, said, "The kids are taking these pills with beer and going crazy. They get into all kinds of car accidents when they are high. They can't seem to get it through their heads that the pills are dynamite."

Although wild driving and car accidents, automobile theft, sexual license, fighting and petty pilfering are the common denominator of juvenile drug addiction, police blotters make it clear that the pills are frequently responsible for more vicious crime: mugging, burglary, rape, armed robbery and even murder. In addition, many teenage suicides have also been linked to drugs.

The Ultimate Cure

There is, of course, big money in the illegal traffic in pills, and this is one of the reasons it is so hard to cope with. The rackets are involved in the illicit traffic in dangerous drugs because of the tremendous profits it brings.

In 1965, Congress adopted helpful amendments to the Federal Food, Drug and Cosmetic Act. Known as the Drug Abuse Control Amendments of

1965, they set up regulations on dangerous drugs similar to the rigid controls on the sale and possession of narcotics. They set particularly stiff penalties for peddlers over 18 years of age who give or sell drugs to anyone under 21, and provide more Food and Drug inspectors. These men, trained in the use of firearms, have the power to make seizures of illegal drugs and to make arrests. Formerly, federal narcotics agents have been handicapped in that they did not carry weapons and had to turn to U.S. marshals to make seizures and arrests.

But new laws and new enforcement manpower are not enough. Virtually every official we talked with emphasized that the ultimate cure for the teenage drug menace lies in the home, the neighborhood, the community. If parents and citizens in general are not sufficiently concerned to take a hand, then the situation will grow worse.

For the segment of the younger generation already on drugs, it is too late. But for the rest of the kids, there's still hope.

1. According to this article, how widespread is drug addiction among juveniles? In what classes of society does it occur? In your opinion, why do young people start using drugs?
 2. In most states, how easy is it for young people to obtain dangerous drugs? What remedies can you suggest for this situation?
 3. In your opinion, are federal laws against drugs fair? adequate? How about your state laws?
 4. Why is glue-sniffing dangerous to the individual? to society?
 5. What's the most persuasive answer you can think of to give a classmate who makes one of these comments? "Glue-sniffing sounds like fun. I'm going to try it"; or "I've tried to kick my habit, and I can't. Anyway, I like it."
 6. Speculate about the links between drug addiction and auto accidents; car thefts; petty crimes; major crimes.
 7. What remedies do the writers suggest for dealing with the teenage drug menace? Evaluate the suggestions.
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Condensed from *Pills, Glue and Kids: An American Tragedy*
The Reader's Digest, June '66

Cool Talk About Hot Drugs

DONALD B. LOURIA, M.D.

Three drugs in illicit use have captured the public imagination: heroin, LSD and marijuana. Around each, layer upon layer of misconception has built up. This article is an attempt to peel away some of those misconceptions.

HEROIN

Around 1900, when various opiates (of which heroin is one) were used in many patent medicines, about one in 400 persons in this country—a tremendous proportion—was addicted; the figure in 1967 was about one in 2000. Our problem is not that we have more heroin addiction than we used to, but that we have been unable to make a dent in the number of heroin users over the past dozen years.

There is not one whit of evidence that heroin users are given to man-to-man violence. Their crimes are more against property.

It is widely believed that one shot of heroin inevitably leads to addiction. This is not true. There is a sharp distinction between habituation (chronic use of the drug) and addiction (physical dependence). There are many weekend users of heroin, or people who take two shots a day, who never increase the amount and never become

physiologically addicted. If heroin is discontinued suddenly for these individuals (the so-called cold-turkey treatment), they recover without any of the symptoms—nausea, vomiting, chills, fever, diarrhea and muscle aches—popularly associated with withdrawal.

What has happened is that the criminal element engaged in selling drugs has cut the heroin inordinately, so that the addict gets a progressively weaker mixture.

About one percent of the addict population in New York dies each year of overdose—an enormous incidence. It can happen, for example, if the addict has just been released from jail after a period of enforced abstinence. He takes the same amount of drug that he did before incarceration, but his body has lost its tolerance. Sometimes, if a pusher wants to get rid of a troublesome addict, he gives him pure heroin; the user takes it, thinking he is getting his usual weak dose, and dies. Or some beginner may see other people use two bags of heroin; not realizing that they have been doing this for months or even years,

he takes two bags—and for him it is a lethal dose

No user knows what he is getting when he buys a packet. He may be getting milk sugar, quinine, baking soda; he may be getting one tenth of one percent heroin; he may be getting 75-percent heroin. Anything above 30 percent is likely to be fatal.

Addiction is a curable disease. When addicts reach the age of 30 or 35, they often suddenly lose the need for heroin, withdraw by themselves and never go back to the habit. It is called the maturing-out process. Why this should be, no one knows. But it is ridiculous to assume that this disease is incurable, and that therefore these people must be maintained indefinitely on narcotics.

There are three major approaches to rehabilitation in the United States. One is civil commitment—which both New York and California employ. Second is the methadone maintenance program such as the one being conducted in New York City (with methadone, a non-damaging synthetic which is itself addictive, substituted for heroin). Finally, there are

the group-therapy programs, typified by organizations such as Synanon and Day Top.

The New York State program, emphasizing education and job rehabilitation, with a careful follow-up, seems to me potentially the most effective. Like other treatments, however, it doesn't deal with the real problem. Unless we stop just treating the disease after it has occurred and do more about prevention—by eliminating urban decay and deterioration, poverty, under-education, prejudice, lack of job opportunities—we will not succeed in minimizing the heroin problem.

LSD

No one knows the prevalence of use of LSD, though four separate studies suggest that about one percent of young people use it.

Advocates say that LSD increases creativity. There is no evidence that this is so. In one study, accomplished pianists were tape-recorded while playing under the influence of LSD. They insisted that they had never played so well before but, when the tapes were played back later, almost invar-

iably their reaction was, "How could I have been that bad?"

Another claim is that it makes one a better person, or that it helps in achieving self-understanding. The level of understanding is usually childishly superficial. One boy was brought into New York City's Bellevue Hospital after taking an enormous dose of LSD. When he finally came out of his trip, which took a long while, he said it had been a great experience—because "I understand myself now." We asked, "What did you find out?" He said, "Through this experience, I have learned that I am basically egotistical." That's a lot of LSD to take to learn that you are egotistical.

Used promiscuously under uncontrolled circumstances, LSD is extremely dangerous. It is absolutely unpredictable. Of the 114 cases hospitalized at Bellevue during an 18-month period, 13 percent entered the hospital with overwhelming panic. There was uncontrolled violence in 12 percent. Nearly nine percent had attempted either homicide or suicide. Of the 114, almost 14 percent had to be sent on to long-term

mental hospitalization, and half of those had no previous history of underlying psychiatric disorder.

LSD has another danger not adequately emphasized. A small but growing number of people who take LSD repeatedly withdraw from society. They engage in perpetual introspective orgies, live a totally drug-oriented life, become negativistic and unconstructive. These people are beginning to worry even some of the proponents of LSD. If the group were to become much larger, it could be a substantial danger to society as a whole.

Also, recent data in both experimental animals and man raises the specter of physical or mental abnormalities in chronic users or their offspring.

I think that the laws concerning LSD should be made tougher. Manufacturing or selling it illicitly should be a felony, and illicit possession should be a misdemeanor.

MARIJUANA

Marijuana is the campus drug. It is a relatively weak form of the hallucinogen known generically as cannabis. (In other

countries, kif and bhang are cannabis preparations of similar strength; more potent variations are ganga, charas and hashish.) Even among chronic users in the U.S., average consumption does not usually exceed three cigarettes a day.

Is marijuana dangerous? The answer is a qualified yes. For one thing, an individual under its influence tends to lose his coordination, yet often has a feeling of omnipotence. A marijuana smoker behind the wheel of an automobile is dangerous. He is in a sense more dangerous—because less likely to be detected—than a drunken driver.

Those who would legalize marijuana often quote the so-called LaGuardia report of a New York City study made in 1944. One section that they do not quote records that nine out of 77 subjects had some form of psychotic episode when given marijuana experimentally. Admittedly, these subjects were given an extract equivalent to something between two and ten cigarettes at one time. But the report also records: "One subject smoked one cigarette and became restless, agitated,

dizzy, fearful of his surroundings, afraid of death. He had three short attacks of unconsciousness." That is not my definition of an entirely safe drug—even though such reactions are infrequent and far less extreme than with LSD.

Marijuana does not inevitably lead the user to experiment with "hard" drugs such as heroin, nor, in the strength smoked in the United States, does it cause addiction or physical deterioration. But it does often start an individual into the morass of drug abuse; whether he moves on or stops depends upon him and his environment. Also, there is evidence from Morocco, where kif is commonly smoked in pipes, in excess of ten pipefuls a day, that heavy consumption is associated with a marked increase in mental derangement.

The arguments for legalization of marijuana are based on the self-indulgent pursuit of pleasure. Its proponents want the right to use the drug because it gives them pleasure. Faced with the data on the potential dangers of its unrestricted use, they rely on the argument that marijuana is no

more dangerous than alcohol. But the major criterion for legalization of any drug should not be a comparison with the dangers of alcohol, but rather the inherent dangers in the drug's indiscriminate use. Otherwise, there would be a proliferation of drugs dispensed merely for pleasure, and if each of these carried no more risks than presented by alcohol—and by cigarettes—the number of persons damaged would inevitably increase strikingly. Surely, society has an obligation to limit the distribution of potentially dangerous drugs.

This nation is clearly kicks-oriented. Some of the drugs used, such as LSD, heroin, cocaine and amphetamines, can cause serious or permanent psychic or physical damage. To minimize the abuse of drugs, we must involve our young people early in constructive activity and in the problems of our society, for those who are so committed tend not to use drugs. For those who are susceptible, the prevention of drug abuse will depend on a judicious mixture of education, reduced supply and laws.

1. Why was more heroin used in 1900 than is used today? What are our problems with this drug today?
2. What sort of crimes are associated with heroin users? Why?
3. How do you picture the life of a heroin addict? What alternatives does his future hold?
4. Why does the writer approve the New York State program of rehabilitation for heroin addicts? Do you agree with his definition of the real problem that underlies this drug menace? What are your suggestions for coping with the real problem?
5. Why is LSD dangerous? How do you account for its use by young people?
6. What suggestions does the writer offer for handling the LSD threat? Evaluate them.
7. Does the writer give you a new understanding of marijuana? Explain. Do you think its use should be legalized? Support your opinion.
8. Reread the final paragraph. What is your reaction toward the ideas expressed?

Condensed from *Cool Talk About Hot Drugs*
The Reader's Digest, November '67 (from New York Times Magazine)

"Give me one positive, convincing, scientific reason why I should avoid drugs. I'm not impressed by warnings, prejudices and fears." Right! And here's the reason, complete with proof.

The Drug "Trip"— Voyage to Nowhere

MICHAEL DRURY

When young people ask, "But what's wrong with taking drugs?" I could weep for the fact that they so seldom receive a meaningful answer. Doctors, psychologists and legal authorities cite the factual drawbacks. But physical facts are not the root fallacy. Drugs remain attractive for the simple reason that they promise something human beings have always been willing to risk the gravest dangers for: wisdom, insight, creative power, ability

to love, attainment of one's full potential.

It is this underlying philosophy that is cockeyed and as dangerous as witch-doctoring. It is this reasoning that rapes the mind—the old, old effort to bludgeon or short-circuit it into yielding what can only be had through diligence, learning, toil, delight.

"But I want to experience everything. It's outdated puritanism to claim the senses are

evil." True, but off-target. The wallowers in every age have loudly claimed man's right to enjoy his senses, when the goal is *through* the senses to enjoy what man may be. Any system that makes the means of learning an end in themselves is subjection, not release. This is perfectly plain in the case of pedants, prigs, authoritarians; and it is equally true of drug fanciers. All are slaves to process, more and more preoccupied with defending that process since it is all they've got. The end utterly eludes them.

"But drugs can expand your consciousness." In most cases, psychedelic drugs produce vivid visual sensations, with kaleidoscopic colors and a vibrancy of image. Auditory effects are less dramatic and less frequent. Taste, touch and smell seem largely uninvolved. A few people notice texture, but this too is visual, not tactile. In short, it is an onlooker's world.

This sort of thing is extolled as expanded perception, augmented consciousness, and the word "psychedelic"—meaning

mind-manifesting—was coined to denote it. A more explicit term would be "sensedelic" since hallucinogenic episodes are sensual, not mental. Obviously, mind and the senses are correlated, but they are not identical. Animals frequently have richer senses than we do, and a computer has greater speed; neither has more consciousness. Unprocessed sense material is a far cry from perception, which requires the act of distilling and relating sense data by the intelligence. This is never a mere reflex.

Despite the subject's vast persuasion of super-powers, by every available test hallucinatory drugs impair the I.Q. temporarily; their long-range effects are not yet known. Motor skills, reason, attention, figuring, drawing, humor (an interesting item), physical energy and ability to relate to others are diminished, slightly to greatly.

"But I've got all this ability, if I could just break through." Nowhere is the drug theory on spongier ground than in its notion that creativeness needs only to be released from the strictures imposed by a yahoo

society.

Ideas are democratic: they rain on the just and the unjust. What distinguishes the creative individual is his use of those ideas. With or without drugs, *Waldstein Sonatas* and *King Lear*s do not arrive full-blown upon untaught sensibilities. It is not the quantity or the novelty of the experience one has. It is the richness of the mind, *seeing into* them, that makes a great artist, or for that matter a great human being. Beethoven wrote magnificent music long after he was stone-deaf because the spirit and training were present, where literal sensual input was not.

Creative process is selection, even exclusion. We are bombarded every day by more and richer sense impressions than we can assimilate. What is required is skill and effort to choose what has or has not relevance to our particular work, whether it is a piece of art or a structured human life. Only the hostile, the confused and inept seek instant transformation by way of drugs. All that is needed is to swallow the magic potion and they shall be seen in their true value by a

humbled world. So the alchemists dreamed of an elixir to make them wise; so bottled sunshine was peddled from the tailgates of medicine-show wagons.

"But drugs make you less selfish; you're more relaxed and you love everybody." What that means is they blur the sharp edges of identity. The fans speak of "dissolving the ego boundaries." This parades as achievement of a high order, but in fact what it extols is infantilism, a breast-sucking state of mind. That's rough, but accurate. For the suckling child, the breast *is* the world and furthermore is himself, since he has not yet learned that his mother's body is not an extension of his person. Those who cannot cope with the challenge of maturity have always idealized infancy as the "true" state of man. But one definition of neurosis is the unbridled wish to return to babyhood. To grow all the way up is to become a realized self, and that takes work.

"Even religion says we should forget the self." Not true. Many

religions call for the *discipline* of self, but that is not the same thing as slopping about the cosmos with no identity. The "mind that is no-mind" of Taoism, the "attention in a relaxed mood" of Zen, the Christian injunction to lose one's life in order to find it—all stress the acquisition of authentic identity, a self. Note the affirmative words: "mind," "attention," "find." These the drug advocate shrugs off in favor of "no-mind," "relax," "lose." Anybody can do that; it's easy. Exactly.

Actually the young person on a psychedelic fling today is much more likely seeking a self than trying to get rid of one. Whether through the indifference of slum parents or the overindulgence of the affluent, a child who is not punished for his misdeeds is deprived of personality. He is a creature whose acts have no consequence—no person, a nothing. The white-collar drug-taker yearns to get out of the social situation his impoverished counterpart longs to get into. Both are seeking to be somebody.

The psychedelic proponents denounce the mechanistic eval-

uation of man, then promptly make him more of an object, a thing, by feeding his spiritual hunger with a chemical diet. It would be funny if it were not first sad.

Drug cultists talk of breaking through the barriers of reality, as if it were somehow the enemy. But reality is not a barrier; it is by definition the one state in which we are at home. It is often a mystery and a marvel, but actual doubt concerning its existence is a severe form of mental illness.

Nothing is claimed for modern hallucinatory drugs that has not in its day been claimed for hashish, opium, morphine, countless roots, berries, fungi and the sacred laurel leaves of ancient Greece and Rome. Men have been there and back ten thousand times, only to discover it is a trip going nowhere. Creative energy is not components, however rich. It is an integrating process. Imagination is not the same thing as the imaginary; and consciousness alone expands consciousness. However long the journey, you've got to come back—or perish on the way.

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1. What is the underlying philosophy about drugs that the writer calls "cockeyed and as dangerous as witch-doctoring"? Why are so many young people misled by this false promise?
 2. Is enjoyment of your senses a safe goal? What does the writer point out about confusing *the end* with *the means*?
 3. According to tests, what effects do hallucinatory drugs have on the user?
 4. Define creativity. Do drugs release it, according to Mr. Drury? Do you agree with his viewpoint? Explain.
 5. Do drugs really make the user less selfish and more loving? What connection is there to infantilism? to maturity?
 6. Explain the distinction between *forgetting the self* and *finding the self*. Which is more desirable, according to this article? Do you agree?
 7. Speculate about the reasons for young persons "tripping out."
 8. Reread the final two paragraphs. What is your opinion of the writer's definition of reality? of creative energy as an integrating process?
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Condensed from *The Drug "Trip"—Voyage to Nowhere*
The Reader's Digest, August '69 (from Cedar Crest College Quarterly)

"Maybe Somebody Else Can Learn From It"

J. ANTHONY LUKAS

Learn what? And what is the "it" mentioned in the title above? You will know when you read this nightmarish article reprinted from the New York Times of October 16, 1967. The story is about two Lindas: one real; the other a "meth monster." How do you account for her tragic fate?

The windows of Dr. Irving Sklar's reception room at 2 Fifth Avenue, New York City, look out across Washington Square—from it a patient can watch pigeons circling Stanford White's dignified Washington

Arch, children playing hopscotch on the square's wide walkways. Dr. Sklar has long been the family dentist of the Irving Fitzpatricks, who live in a 30-room home a mile from the Greenwich, Connecticut,

Country Club, and for them "the Village" has always been the scene they saw out his windows. But for their 18-year-old daughter, Linda—at least in the last ten weeks of her life—the Village was a different scene whose ingredients included crash pads, acid trips, freaking out, witches and warlocks.

If the Fitzpatricks' knowledge of the Village stopped at Washington Square, their knowledge of their daughter stopped at the unsettling but familiar image of a young, talented girl overly impatient to taste the joys of life.

Which was "the real Linda"—the Linda of Greenwich, Connecticut, or the Linda of Greenwich Village? As the *New York Times* investigated the two Lindas through interviews with her family and with her Village friends and acquaintances, it found her a mixture so tangled that Linda herself probably did not know.

"Fitzpoo" to Her Family

The forces at work on young people like Linda are the source of puzzlement for many other parents and of studies by social

workers and psychologists, as they seek to understand the thousands of youths who are leaving middle-class homes throughout the country for the "mind-expanding drug" scene in places like Greenwich Village. Until a few months ago, Linda—or "Fitzpoo," as she was known to her family and friends—seemed to be a happy product of wealthy American suburbia. "Linda is a well-rounded, fine, healthy girl," her mother, a well-groomed woman in a high-collared chocolate-brown dress, said during the three-hour *Times* interview in which she often used the present tense in talking of her daughter.

Born in Greenwich, Linda attended Greenwich Country Day School, where she excelled in field hockey, swimming and riding. She went on to Oldfields School, a four-year college-preparatory school in Glencoe, Maryland. A blonde tending to pudginess, she never quite matched the striking good looks of her mother or of her elder sister, Cindy. At country-club dances, she often sat in the corner and talked with one of her half brothers; but,

apparently more interested in sports and painting than dancing, she never seemed to mind.

Vacations With Family

Last June Linda returned from Oldfields and, after several weeks in Greenwich, she left with the family for a month in Bermuda. "The family always takes its summer vacations together; we always do things as a family," said Irving Fitzpatrick, a tall, athletic-looking man.

The family included seven children—Linda and 9-year-old Melissa (Missy) from this marriage; Perry, 32; Robert, 30; Carol, 27; and David, 25, from Fitzpatrick's previous marriage, which ended in divorce, and Cindy from Mrs. Fitzpatrick's first marriage, which also ended in divorce. But this time only Linda and Missy accompanied their parents to Bermuda, while Cindy and her husband joined them later for ten days.

As the Fitzpatricks remember it, Linda spent "a typical Bermuda vacation"—swimming in the ocean; beach parties on the white sands; hours of painting; occasional shopping expeditions to town.

On July 31, the family returned to Greenwich, where Linda spent most of August. Again, the family insists she was "the girl we knew and loved." They say she spent most of her time painting in the studio in the back of the house. But she found plenty of time for swimming with friends in the large robin's-egg-blue pool. If Linda went to New York during August, the family said, it was "just a quick trip for the day."

The "Village" Version

Linda's Village friends have a different story of her summer.

"Linda told me she took LSD and smoked grass (marijuana) many times during her stay in Bermuda," recalled Susan Robinson, a small, shy hippie who ran away last May from her home on Cape Cod, Massachusetts. "She talked a lot about a fellow who gave her a capsule of acid (LSD) while she was down there and how she was going to send him one."

Susan and her husband, David, first met Linda when she showed up at their two-room apartment early in August. The apartment served last summer as a "crash pad"—a place

where homeless hippies could spend the night. "Linda showed up one evening with a guy named Pigeon," Susan said. "She'd just bought Pigeon some acid. She stayed maybe a couple of hours and then took off.

"A few nights later she came back with a kid from Boston. She turned him on, too (gave him some LSD). She was always doing that. She'd come into the city on weekends with \$30 or \$40 and would buy acid for people."

David Robinson, a gentle, black-bearded young man who worked in a brassiere factory, recalled how Linda turned him on, on August 22. "We went to this guy who sold us three capsules for \$10 apiece," he said. "She put one away to send to the boy in Bermuda, gave me one and took one herself. We were out in Tompkins Park and we dropped it (swallowed it) right there. Around midnight we walked over to Cooper Union Square where we had a very good discussion with a drunk. By then we were really flying. At 8 a.m., Linda took the subway up to Grand Central Station and got on the train to Greenwich."

Preparations for School

That weekend Mrs. Fitzpatrick was getting Linda ready for school. "We bought her almost an entire new wardrobe," she recalled, "and Linda even agreed to get her hair cut."

For months Fitzpatrick had complained about Linda's hair, which flowed down over her shoulders, but Linda didn't want to change it. Then at the end of August she agreed. "We went to Saks Fifth Avenue and the hairdresser gave her a blunt cut, short and full. She looked so cute and smart. Hardly a hippie thing to do."

The first day of school was only 11 days off when Linda went to New York on September 1. When she returned to Greenwich the next day, she told her mother she didn't want to go back to Oldfields—she wanted to live and paint in the Village. "We couldn't have been more surprised," Mrs. Fitzpatrick said.

"We talked about it all weekend," Fitzpatrick added. "Finally, on Sunday, we gave her our reluctant permission, though not our approval."

"After all," her mother said,

"Linda's whole life was art. She had a burning desire to be something in the art world. I knew how she felt. I wanted to be a dancer or an artist when I was young, too."

The Fitzpatricks' minds were eased when Linda assured them she had already made respectable living arrangements. "She told us that she was going to live at the Village Plaza hotel, a very nice hotel on Washington Place, near the University, you know," her mother said. "'I'll be perfectly safe, Mother,' she kept saying. 'It's a perfectly nice place with a doorman.' She said she'd be rooming with a girl named Paula Bush, a 22-year-old receptionist from a good family. That made us feel a lot better."

Linda left for New York the next morning, and the family never saw her alive again.

A Room at "The Plaza"

The Village Plaza has no doorman. The stooped desk clerk said, "Sure, I remember Linda. But Paula Bush? There wasn't no Paula Bush. It was Paul Bush." Ruffling through a pile of thumb-marked cards, he came up with one that had

Linda's name inked at the top in neat Greenwich Country Day School penmanship. Below it in pencil was written: "Paul Bush. Bob Brumberger."

"Yeh," the clerk said. "She moved in here on September 4, Labor Day, with these two hippie guys. They had Room 504. She paid the full month's rent—\$120—in advance. Of course, she had lots of other men up there."

"I kept telling her she hadn't ought to act like that. She didn't pay me any attention, but she never answered back real snappy like some of the other girls. She had something—I don't know, class. The day she checked out—oh, about September 20—she said, 'I guess I caused you a lot of trouble,' and I said, 'Oh, it wasn't any trouble, really.' You want to see the room?"

The elevator was out of order. The stairs were dark and narrow, heavy with the sweet reek of marijuana. A knock, and the door to 504 swung open. A bearded young man took his place again on the swaybacked double bed that filled half the room, and three girls were plucking chocolates

out of a box. On the mirror above the dresser with one drawer missing was scrawled in what looked like eyebrow pencil, "Tea Heads Forever" (a tea head is a marijuana smoker), and in lighter pencil, "War Is Hell."

Linda's Other Room

"Would you like to see Linda's room?" her mother asked. On the third floor, Mrs. Fitzpatrick opened the red curtains in the large room. "Red and white are Linda's favorite colors; she thinks they're gay," Mrs. Fitzpatrick said, taking in the red-and-white-striped wallpaper, the twin beds with red bedspreads, the red pillow with white lettering, "Decisions, Decisions, Decisions."

On the shelves, between a ceramic collie and a glass Bambi, were Edith Hamilton's *The Greek Way* and Agatha Christie's *Murder at Hazelmoor*. Nearby was a stack of records, among them Eddie Fisher's "Tonight" and Joey Dee's "Peppermint Twist." In the bright bathroom hung ribbons from the Oldfields Horse Show and the Greenwich Riding Association Show.

"As you can see, she was such a nice, outgoing, happy girl," her mother said. "If anything's changed, it's changed awfully fast."

Downstairs again, the Fitzpatricks said they had been reassured about Linda's life in the Village because she said she had a job making posters for a company called "Poster Bazaar" at \$80 a week.

Nobody the Times interviewed had heard of "Poster Bazaar." The records show that Linda worked for \$2 an hour selling dresses at a shop called Fred Leighton's Mexican Imports, Ltd. On the third day she was discharged. "She was always late," a salesgirl said.

David Robinson said Linda supported herself from then on by "panhandling" on Washington Square. "She was pretty good at it," he said. "She always got enough to eat." Yet David recalled that Linda frequently talked about making big money. "She had a thing about money. Once she told me she wanted to get a job with Hallmark cards drawing those little cartoons. She said she'd make \$40,000 a year, rent a big apartment on the Upper

East Side and then invite all her hippie friends up there."

"Linda was very shy," her mother said. "When a boy got interested in her, she'd almost always lose interest in him. She got a proposal in August from a very nice boy in Arizona. She told me, 'He's nice and I like him, but he's too anxious.' The boy sent flowers for the funeral. That was thoughtful."

The Nonexistent "Paula"

The Robinsons and her other friends in the Village said there were always men in Linda's life there: first Pigeon, then the boy from Boston, then Paul Bush, who carried a live lizard named Lyndon on a string around his neck. Bush, who said he left New York on October 4, was interviewed by telephone in San Francisco.

"I met Linda at the Robinsons' about August 18—a few days after I got to town," he recalled. "We wandered around together. She said her parents bugged her, always hollered at her. So I said I'd get a pad with her and Brumberger, this kid from New Jersey.

"She said she'd tell her parents she was living with a girl

named Paula Bush, because she didn't want them to know she was living with a man. Then Brumberger left and she brought in some other guy. I don't know who he was, except he was tall with long hair and a beard."

This may have been Ed, a tall hippie whom the Robinsons saw with Linda several times in mid-September. Later came James L. (Groovy) Hutchinson, with whom she was killed.

Toward the end of September, Susan Robinson says, Linda told her she feared she was pregnant. "She was very worried about the effect of LSD on the baby, and since I was pregnant, too, we talked about it for quite a while."

"I don't believe Linda really had anything to do with the hippies," her father said. "I remember during August we were watching a CBS special about the San Francisco hippies. I expressed my abhorrence for the whole thing, and her comments were much like mine. I don't believe she was attracted to them."

Witches and Warlocks

Linda disappeared from East

Village in late September. When Susan saw her again on October 1, she told her she had met two warlocks (male witches) in California and had driven back with them. "Linda told me several times she was a witch," Susan said. "She had discovered this one day when she was sitting on a beach and wished she had some money. Three dollar bills floated down from heaven. She was always talking about her supernatural powers."

One of Linda's self-styled warlock friends, who called himself "Pepsi," was in his late 20s, with long, sandy hair, a scruffy beard, heavily tattooed forearms, wire-rim glasses and high suede boots. "My buddy and I ran into Linda in a club in Indianapolis called the Glory Hole," Pepsi said. "You could see right away she was a real meth monster (a user of methedrine). We were two days driving back. We got in on October 1, and she put up with me and my buddy in this pad on Avenue B. She was supposed to keep it clean, but all she ever did was sit around. She had this real weird imagination, but she was like talking in smaller

and smaller circles. She was supposed to be this great artist, but it was just teeny-bopper stuff.

"It sounds like I'm knocking her. I'm not. She was a good kid, if she hadn't been so freaked out on meth. She had a lot of, what do you call it—potential. Sometimes she was a lot of fun to be with. We took her on a couple of spiritual séances, and we went on the Staten Island Ferry one day at dawn and surfing once on Long Island."

Pepsi saw Linda at 10 p.m. on October 8 standing in front of the Cave on Avenue A with Groovy Hutchinson. She said she'd taken a grain and a half of speed (methedrine) and was "high." Three hours later she and Groovy were dead—their nude bodies stretched out on a boiler-room floor, their heads shattered by bricks. The police charged two men with the murders and were continuing their investigation.

"It's too late for the whole thing to do us much good," her brother, Perry, said after he learned of her life in the Village. "But maybe somebody else can learn something from it."

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1. Did Linda unknowingly choose her tragic end, or was it forced upon her? Explain your point of view.
 2. Why do you suppose Linda was attracted to Greenwich Village? Does it appeal to you?
 3. Why was Linda able to fool her family so completely? Or *did* she? Do you suppose they were unwilling or unable to admit that they saw through her lies?
 4. In what ways did Linda lie to herself?
 5. Do you think Linda had too much or too little freedom at home? in Greenwich Village? Why do you think as you do?
 6. Enumerate the influences that you think led to Linda's downfall. Consider her life at home; at school; her friends; her use of drugs.
 7. Whom—or what—do you blame most for her murder? Was it inevitable?
 8. How do you suppose Linda felt about leading a double life? Why couldn't she change things that made her unhappy?
 9. In what ways does Linda's story speak with tragic eloquence to both parents and youth today?
 10. Do you think the title is true?
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Condensed from "Maybe Somebody Else Can Learn From It"
The Reader's Digest, December '67 (from New York Times)

FACING FACTS ABOUT DRINKING AND SMOKING

The Sober Truth About Social Drinking

JOYCE KISSOCK LUBOLD

What's the difference between social drinking and just plain drinking? If you learn to translate our foolishly fuzzy Liquor Language, you'll know. And you'll not be amused at the harsh facts.

As far as drinking goes (and too often it goes farther than it should), we all have to take a position these days. Some choose the straight-up-and-down perpendicular of the teetotaler, and some fall tragically into the flat-on-your-back horizontal of the habitual drunk. But most of us maintain a foothold on the slippery arc that separates the abstainer from the alcoholic. We call ourselves "social drinkers." Whatever *that* means.

I know a pleasant grandmotherly lady who once in a

while takes a glass of wine or a single cocktail, and then boasts that she feels "a little tiddly" before she has taken her third sip. She calls *herself* a "social drinker"—and that sophisticated term makes her feel like a woman of the world. And I know a hard-driving businessman who has two or three drinks to smooth his business lunches, downs as many highballs as he can before the bar car on his commuting train pulls into his home station, says that he needs a few cocktails before dinner to help him "un-

wind," and enjoys a nightcap or two before bedtime. He calls *himself* a "social drinker"—and that innocent term makes his compulsion to drink sound like a casual social habit.

I call *myself* a "social drinker," too. I drink a little more than the lady, and a lot less than the businessman, but the imprecise vocabulary of the Liquor Language that we all speak puts all three of us in the same leaky boat. (I don't really mind being shipmates with the giggling grandmother, but I surely don't want to sink to the bottom with that ginny giant of industry!)

This kind of confusion never existed in the old days when sawdust covered saloon floors. They didn't call it "social drinking" then; they called it plain *drinking*. If a man drank too much, they called him a "drunk," and if a woman drank at all, they called her a "hussy," and any party with guests like that was called a "brawl." But we're much more sophisticated now. When a man drinks too much, we say he's "a little high"; and we are surprised not by the woman who drinks but by the one who doesn't. And

we'd never call a party with guests like that a "brawl"—we call it a cocktail party. We speak a different language nowadays, and that may be part of our trouble.

It's not unusual, of course, for new languages to develop. Baseball fans jabber together in their own particular jargon, and so do stamp collectors. In fact, almost any sport or hobby has a language all its own. But social drinking—which is surely not a sport, and heaven help us if it gets to be a hobby—has developed a vocabulary of deliberate inaccuracy. The Liquor Language is as foggy and fuzzy as its users too often become.

In the first place, there are absolutely no mathematical terms in it. Though all social drinkers agree that the only way to stay reasonably sober is to keep track of how *much* you drink, they have no words in their language to count with. Social drinkers count their first drink as a "don't mind if I do," the next "a little refill," the third a "just a splash, thanks"; anything after that is obtained by waving an empty glass in the air and calling, "While you're up, Harry." No wonder social

drinkers sometimes get less than social. Even the most conscientious of them can have a hard time adding up a refill, a couple of splashes and several while-you're-ups.

I'm sure the man I was talking to at a party some evenings ago was the victim of just that kind of muzzy mathematics. Early in the evening, he'd been the kind of man every woman hopes to meet at a party. He was witty, informed, interested in the world, and interested—in a decorous way, of course—in me. But our hostess decided, unfortunately, to give the roast another three quarters of an hour in the oven, and my new friend succumbed to a refill and a splash or two that just didn't compute. His wit disappeared, and his interest in the world and in me turned into an intensive interest in himself, causing him to plunge into an endless account of a golf game from the murky past. He had, on that subject, total recall. All I had was total recoil.

The fact is that social drinking can be pleasant only when it is not allowed to pass the moderate-drinking checkpoint. And right here we might also

re-introduce that terribly useful five-letter word "d-r-u-n-k." Social drinkers never use that word. It's so ugly—and it's definite. Social drinkers don't like to be definite. Instead, they use any one of a hundred jolly-sounding terms, each one alike in its careful nonchalance: "Joe sure tied one on last night, didn't he?" "He was feeling no pain—that's for sure." And so on, and on, and *on*—when the truth is that Joe was drunk. But the cheerful babytalk makes the whole thing sound so amusing—and so very innocent.

It's an oversimplification to say that all our drinking problems would be solved by semantics. But it seems possible that we could think straighter about them if we talked straighter. All we have to remember is that "social drinking" is exactly the same as plain "drinking" and must be approached with the same care. If we can substitute everyday speech for the foolish fuzziness of the Liquor Language, we will realize that a drink is a drink, that a refill plus a couple of splashes is a lot of drinks, and that a drunk is a drunk, no matter how little pain he's feeling.

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1. What is the sober truth about social drinking, as the writer sees it? Do you agree with her viewpoint? Explain.
 2. Why does the writer object to Liquor Language? Do you consider her objections valid?
 3. How might it help us to think straighter about drinking if we talked straighter about it?
 4. What are the reasons people give for moderate drinking? for heavy drinking? Speculate about the underlying causes that may account for their drinking.
 5. In your opinion, what are the dangers of drinking? Should young people in their early teens be served liquor at home parties? in public places? Justify your viewpoint.
 6. In your own experience, what encounters have you had with drunkenness? What were your reactions toward persons who had drunk too much?
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Condensed from *The Sober Truth About Social Drinking*
The Reader's Digest, July '68 (from Philadelphia Sunday Bulletin Magazine)

What Happens When You Drink

HERBERT YAHRAES

What does your body do to alcohol, and what does alcohol do to you? Here's the undiluted truth from a top scientific authority.

In the interest of science a few years ago, a Yale professor threw two parties in his laboratory. One was for hard, habitual drinkers—a group of derelicts from Skid Row. The other was for light, occasional drinkers—a group of teachers. The derelicts' party was dull; the guests just sat and drank without any outward sign of

alcohol's effect until, one by one, they thudded to the floor in a stupor. The teachers, on the other hand, joked, laughed, slapped one another on the back and, on just two or three cocktails, acted tipsy.

But whether, after a few drinks, the guests appeared sober or high, an equal number of drinks gave them all approx-

imately the same concentration of alcohol in their blood. And they responded pretty much alike to tests of the speed of their reactions.

"Obviously there is a difference in the way people behave while drinking," the professor who gave the parties points out. "However, when people are of average size, there is not much difference in their basic tolerance to alcohol."

The host was Dr. Leon A. Greenberg, then a physiologist on the staff of Dr. Howard H. Haggard, director of Yale University's Laboratory of Applied Physiology and founder of the famous Center of Alcohol Studies, a division of the Laboratory. When Dr. Haggard retired, Dr. Greenberg took over. Because of his work with the Center for many years, Dr. Greenberg is one of the top authorities on what happens when we drink alcohol.

If you toss off a jigger of 100-proof whiskey (50 percent alcohol), the stomach's gastric juices immediately begin to dilute it, until the concentration of alcohol drops to about five percent. The presence of other food in the digestive system

will slow down its absorption, but if you haven't eaten, about a third of the alcohol will pass almost immediately into the blood, entering it through the tiny capillaries in the stomach's wall. The rest passes into the small intestine and is quickly taken up by the capillaries there. Alcohol is the only food absorbed in this way—directly, without digestion. That's why it hits fast.

Next it passes through the liver, where oxidation begins. This is the process whereby the oxygen carried by the blood transforms the chemical energy of food into heat and work.

If you drink slowly enough, the alcohol will be oxidized by the liver as rapidly as it is absorbed, and you will not "feel" it. By spreading half a highball or three quarters of a can of beer over 60 minutes, you can drink 24 hours a day without becoming even mildly high. In this case, though, you've gulped an ounce of whiskey in a few seconds, and the liver can handle only three quarters of an ounce in an hour. Hence most of the alcohol passes through the liver unchanged, reaches the heart by way of the

veins, and is then pumped through the body and brain.

Thus, within a few minutes, you begin to feel your drink.

If you are a large person, you will feel less effect than a smaller person does. That's because you have more blood and other body fluids to dilute the alcohol. Within about an hour and a quarter, as the now highly diluted alcohol keeps passing through the liver, 90 percent of it is burned for energy; the other ten percent is eliminated in the urine and breath.

If you add water to your whiskey, the alcohol gets into your blood stream just as fast. If you add soda water it will get there even faster, because carbonation speeds the passage through the stomach—which explains why champagne goes to your head so quickly. A can of beer contains about the same amount of alcohol as an ounce of whiskey, but beer and wine contain solid materials such as protein and carbohydrate which slow up the rate at which alcohol gets into the blood.

That is what you do to alco-

hol. Now, what does alcohol do to you?

Experiments at the Center of Alcohol Studies indicate that a little alcohol—the amount found in two or three cans of beer—calms the nerves and eases tensions. Dr. Greenberg tells of the TV producer who, trying to demonstrate the bad effects of alcohol, put a man through a driving test twice in front of the cameras: first without a drink, then after two drinks.

"I could have told him what might happen," Dr. Greenberg says. "The driver, at the start, was in a strange situation and nervous. After a couple of drinks he calmed down and made a better score than he had the first time."

In most situations, however, skills as well as tensions are lowered. A multitude of tests show that after two or three cocktails or highballs we react a trifle more slowly to the flash of a light or the ring of a bell, and that we do not type, add, memorize, sort out cards or do other such tasks quite as well. However, since our center of judgment is depressed, we *think* we can do everything

better. The chief danger in driving after a few drinks probably lies in the fact that our confidence zooms—and we take chances.

Dr. Greenberg once tried to induce hangovers in a group of subjects by giving them a pint of whiskey apiece. It knocked them out, but in the morning, except for queasy stomachs, they felt all right. "They had not gone through the fatiguing process of a party—too much smoking, too little sleep. They had simply had their drinks and fallen into bed," he explains. Hangovers can also be partly psychological; if you feel guilty about your drinking, it hits you worse. These men had downed the whiskey as a research project, and therefore their consciences were clear.

Besides deadening us to the effects of fatigue, too much alcohol upsets our mineral balance. Some of the water inside our tissue cells flows through the cell walls, taking potassium, sodium and other minerals with it, and joins the water outside the cells. That's why hungover people have a thirst, but drinking quantities of water before going to bed won't help be-

cause it won't stay in the cells where it's needed. The balance remains upset until the alcohol is completely burned up. Neither exercise nor any other measure known will hurry this burning process.

What about the permanent effects of drinking? "In the moderate drinker we haven't found any," says Dr. Greenberg. Alcoholics—people who can't stop after a few drinks—are another matter. Excessive consumption of alcohol cuts down their normal intake of protein, vitamins and minerals, so they often suffer severely from nutritional deficiencies. Most of them have a disturbed liver, too, and one in ten has delirium tremens or some alcoholic mental disease.

"Present scientific knowledge," Dr. Greenberg reports, "provides no physiological explanation of why 4.7 million drinkers in the United States become alcoholics. It appears, mainly, to be a personality problem. The evidence today is that the problem isn't only alcohol—it's people."

1. Why is it advisable for a person never to drink without eating?
2. What effect does each of these things have on the speed with which a person feels a drink—his size? how fast he drinks? whether he adds soda water?
3. What effect does alcohol have in most situations on a person's center of judgment? on his tensions? on his skills?
4. According to this article, what is the chief danger of driving after drinking? Do you agree?
5. What causes hangovers? Why do hungover persons feel thirsty?
6. What are the permanent effects of drinking on moderate drinkers? on alcoholics?
7. Speculate about the causes of alcoholism. Do you think it is mainly a personality problem, or is it a disease? Find what recent research has to say on this matter.

Condensed from *What Happens When You Drink*
The Reader's Digest, April '57 (from Popular Science Monthly)

"My Name Is Robert. I Am an Alcoholic..."

ANONYMOUS

What did the words in the title above signify to the man who uttered them? Why did they mark a turning point in his life? Here's a revealing story that will bring you increased understanding of the agonizing fight against alcohol that thousands wage—and some, like Robert, win.

"**O**ur Father, who art in heaven..."

At the end of my first Alcoholics Anonymous meeting, the words of the old prayer came suddenly alive. Black despair melted into a glimpse of health and a good life, of relief from suffering, remorse, anguish—just a ray of hope, but enough for me to square my shoulders in new determination.

Earlier in the meeting the chairman had called on a vigorous, well-groomed, prosperous-looking citizen to speak. The man began: "My name is John, and I am an alcoholic." Then he went on to tell how as a sales manager of a nation-

wide hardware firm he had discovered that cocktails before business luncheons softened up customers, cocktails before sales-staff dinners made him more relaxed, encouraged ideas. He told about packing a bottle to take on the Sunday-night train to a distant city, about learning to leave a good slug in the bottle for an eye-opener Monday morning.

Then he began to miss his Monday appointments; district salesmen never saw him until midweek. Finally he lost his job, his family and his health. All this time John had told himself, "This is my problem. I'll handle it." But short stretches of so-

briety always gave way to worse trouble.

I sat there thunderstruck. This man was telling *my* story, except that I am a professional man. Like John, I thought that my will power was strong, but I simply could not do what my friends could do; sip a couple of drinks, eat a good meal and get up in the morning, rested. I always missed one train after another and ended the evening stumbling, dreading the next day. I wondered if John had had blackouts such as were hitting me lately, if he ever got up in the morning with no idea of where he had left his car, without a dollar left in his wallet. I could tell these people about meeting an important client for lunch and not being sure whether I could get a fork to my mouth; about the soul-shattering degradation of trembling hands that spilled coffee on my shirt or caused the match to miss lighting my wife's cigarette.

I could tell them—but would I? I shrank from the prospect of getting up before this roomful of ex-drunks and peeling myself open for their inspection.

How could people reveal what seemed to me so shameful a weakness? Could I ever admit to being one of them?

The chairman kept things going in friendly fashion. "I should like to explain to any newcomers," he said, "that AA is strictly anonymous. It is our tradition to place principles before personalities. The door of AA swings both ways. You can come in; you can go out. You can always come back—we'll be here."

Then he called on an attractive young woman.

"My name is Kate, and I am an alcoholic," she began.

Kate told the story of the near ruin of her home. As soon as the children were off to school and her husband had left for work, she would try to remember where she had hidden the bottle the night before. The first drink was like pulling down a shade, shutting out her remorse and shame, blotting out the hangover. She played records, exchanged neighborhood gossip over the phone with friends. Instead of eating lunch she drank it. By the time the children came home she

was in bed. "Mother has a headache. Make yourself some sandwiches for supper."

Again I thought: Will I ever be able to reveal my past like that? The closest I had ever come to it was a session I had had with a well-known doctor.

"Face your situation," he had told me. "When you understand what your problem is and why you have it—the real reasons, not your alibis and excuses—you can enjoy life again. Most people are not alcoholics and probably never will be. But drinking is a sickness for five million men and women, and you're one of these." The doctor recommended I try AA.

Kate ended her talk with a phrase that stuck in my mind: "But for the grace of God and AA, I wouldn't be here tonight." Then came the Lord's Prayer: "...And lead us not into temptation, but deliver us from evil..." and the meeting broke up. I left sobered, thoughtful, determined to pull myself out of the abyss.

For the next three months I attended two or three AA meetings a week. No one gave me any lectures; everyone seemed

glad to see me. I began to feel normal and healthy. Instead of stopping at bars after the office, I went directly, eagerly home. My old hobbies, like fishing, which I had neglected for years, began to look good again. My wife was happy. And one morning my daughter said, "Daddy, every night I thank God, and I just want to thank you for being well again."

Then I gave up AA meetings. They were for somebody in bad shape—I didn't need them any more. This period lasted a few weeks. My family was beginning to trust me, and one day Marge told me she planned to take the children on a weekend family visit. Out of habit I welcomed the chance to be alone, puttering around, watching TV—and drinking. Then, suddenly, I thought: "But I'm *not* drinking—and I don't want to start. What kind of crazy thinking is this?"

As the week wore on, I tried with less and less success to get the idea of having a few drinks out of my mind. The family drove away Saturday morning early; that evening I walked to the liquor store and bought two bottles. Only the

first drink tasted as I had hoped. During the rest of that bottle and half of the second, I sat cursing myself. "Oh, God, can I ever stop again?"

Sunday night I had to call a doctor to get a shot in the arm before the family got home. And the next night I went back to AA, shaky, overwhelmed with remorse. I decided that I ought to admit my slip. I could not make it up the aisle to the front as the others did, so I just stood and muttered, "This weekend I tried liquor. I couldn't handle it. Thank you for keeping the door of AA open. I have the proof now that I don't want to leave again. I know the only way out of the abyss is to give up liquor."

During the next few months, I actually enjoyed being sober. I settled down to regular attendance at the AA group. But I was not yet being honest with these decent people and with myself, for the terrible thought returned that someday I might do what no alcoholic has ever been able to do: drink normally again.

Then one night the chairman dumfounded me by announc-

ing: "For the next month I should like to name Robert, our new member, as chairman." He was referring to me. How in the world could I do it? I spent every evening rereading what we in AA call the Big Book and leafing through our monthly magazine to bone up for the job. I studied our 12 steps to sobriety: the admission that we are helpless against alcohol but that a power greater than ourselves can restore us to sanity if we will turn over our wills and lives to God.

The night of my first meeting as chairman, I stood near the entrance greeting everyone, Marge standing happily at my side. Alcohol is no respecter of persons: I was saying hello to lawyers, mechanics, doctors, housewives, business leaders—and a few newcomers who looked shaky and white.

I opened the meeting with the traditional AA prayer: "God grant me the serenity to accept the things I cannot change, the courage to change the things I can, and the wisdom to know the difference."

While I read the brief statement of principles which starts

every AA meeting, that prayer began repeating itself. "The courage to change the things I can . . ." Suddenly the truth flashed into my mind with blinding clarity. *You are still a coward, still holding out; you are not really, not sincerely, here!* Suddenly I could see the lies I had told the doctor who was trying to help me, the deceit of making light of my difficulties to my family and associates, those endless alibis and excuses that had always given me a getaway route for a backslide into drinking. I had never achieved the humility to admit, to accept and to act on my problem wholeheartedly.

The next few words may have sounded natural to the audience, but to me they represented unconditional surrender. They meant I was not just a visitor. For I finally uttered the words: "My name is Robert, and I am an alcoholic."

A great weight lifted from my mind. Forgetting all the words I had read in the literature of AA, the thoughts of others that I had memorized, I plunged ahead: "I have just gone through a few moments of decision that I would not

swap for anything else that ever happened to me. Most of us in this room have in common a serious physical and emotional problem. We are trying to do something about it. I have just learned in standing up here before you that I can without a shadow of a doubt succeed. I can achieve recovery and can help others as you are helping me. Without AA meetings and group fellowship, I would be lost. I can't do it alone. I thank God I don't have to."

The final speaker emphasized the importance of taking each day as it comes: "This is a 24-hour program. Today is the *only* day that counts. Yesterday is gone, and tomorrow may never come."

I concluded the meeting: "AA is not a religious organization, but many of us believe that the spiritual part of the program is the most important. We'll stand and close the meeting in the usual way: '... Give us this day our daily bread. And forgive us our trespasses . . .'"

As Marge and I walked home hand in hand that night, we shared the serenity of accepting the things we could not change, because some power

had given me the courage at last to change the things that I could, and Marge and I continue to know the difference.

1. In fighting alcoholism, why isn't will power enough?
 2. In what ways does Alcoholics Anonymous try to protect the dignity and sensitivities of its members? What is your evaluation of the work it does?
 3. "Face your situation," the doctor advised Robert. Why did it take Robert so long to do so? Do you think he could have done it without AA?
 4. Why is the "day-at-a-time" approach essential for alcoholics?
 5. Will Robert ever be able to drink normally again? What does he think?
 6. What help is there for children of alcoholics? Find out about the work of the organization named Alateen.
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Condensed from *"My Name Is Robert. I Am an Alcoholic . . ."*
 The Readers Digest, November '59 (from The Atlantic Monthly)

Penny Plumer's Bequest

Penny was only 18 when she died of cancer. Here is her mother's letter to Penny's 16-year-old brother—who smokes.

MARY PLUMER

DEAR CHRIS,

I am writing you today because your sister Penny has died of cancer. Which, of course, you know. You came home five days before she died, talked to her, joked a little, and believed with us that a miracle would let her live. You suffered through the two days of coma and gasping breath, and conducted yourself manfully during the funeral weekend.

Now you have returned to prep school—away from home, as you were during most of Penny's illness. To have you stay away was our deliberate choice.

We saw no good in keeping you here to wait with us in doctors' offices, tumor clinics and hospitals.

But now we wonder. For there was a gain to be made by your staying home. You could have been at Penny's side in the hospital. You could have met cancer face to face.

And this would have been good. For you obviously do not believe that cancer is anything to worry about. Two nights ago, before you returned to school, you kissed me good-night—and in that instant I knew that you

were smoking once again.

Have you already forgotten that Penny planned to write a book about cancer? She had known her vicious invader for three months, and wanted very much to describe it for kids like you. Her best friend Linda was going to illustrate the book.

Linda stopped smoking, Chris. But then Linda had an advantage over you in that she visited Penny every day of her fight against cancer. And Linda stopped smoking the day that Penny looked at her—blue eyes meeting brown—and said, "Here I am with something I don't want, and *you're* trying your darndest to get it."

This is what we denied you.

Linda saw Penny's legs and face grow thin. She saw a bouncy high-school senior begin to lose steam, decline dates and struggle to climb the stairs. She endured with Penny the weeks of half-questions and half-answers while we all waited for Penny to get well.

After her initial operation, Pen *did* recover wonderfully, and for 60 bittersweet days the cancer seemed arrested. She dated, went skin diving, even held a job to earn extra money

for college clothes she wanted.

There came a day, however, when she had to leave her job; nausea and weakness had cut her down. Next she started swelling with fluid, growing bigger and bigger until one day she cried out, "Mama, do something—or I'm going to pop!" A call brought our surgeon to the hospital, where he used a syringe to draw off much of the fluid. And Penny went home feeling better.

Not long after, a group of specialists determined to try a two-week series of chemical injections, after which Penny was to go home for a month, then return for another two weeks of treatment. Now she realized for the first time that her entry into college would be delayed. But she was cheerfully philosophical about it—and game to fight cancer until she won. She wanted so desperately to get well.

At the hospital, Penny was initiated into a round-the-clock series of injections: chemicals to stop the cancer; fluids to overcome the vomiting that the chemicals caused; human albumin to replace the protein being lost in fluid build-up; penicillin

to prevent infections. Something, always something, being fed into Penny's veins.

After many hours of this, the needle would become dislodged. The skin would swell with yellowed puffiness as the fluid seeped into the wrong area. And the needle would be pulled out and reinserted.

This is a technique that separates an experienced nurse from a less experienced one. But even the good ones have trouble when the veins have been used up and the arms are bruised purple with blotches from dislodged needles.

Linda came to the hospital every day, and the two of them played gin rummy for hours, and talked, and pretended that Penny would get well. Later came days when Linda could not talk to Penny at all, for Penny was dozey with sedation to ease the pain. Linda would just wait by the bed, and Penny would moan and make senseless remarks in her sleep. Often she would jump and cry out, awakening herself.

Most of Penny's pain was caused by the cancerous tumor in her lungs which caused the accumulation of fluid, which in

turn shut down her supply of air until she would say, "Doctor, I can't breathe. Can't you do something to let me breathe?"

So they did what they could do. Our good, kind surgeon, who loved Penny for her smiling courage as she loved him for his humor and gentle hands, would insert a long needle between her ribs and slowly suck out syringe after syringe of thick, orange fluid, full of protein and other life-giving qualities. Later, a catheter was taped into an opening he made in her abdomen. And from this he released another two quarts of the same thick fluid.

By this time a radioactive substance had been flown from New York and inserted into Penny's lung cavity in an attempt to stop the wildfire cancerous growth. Tethered as she was to tubes, it was hard for Penny to find a comfortable position in bed. "Mama, what am I doing wrong?" she asked me one day. "Why don't I get well?" There was no answer. Nothing she did was wrong, and nothing the doctors knew to do seemed right, though they fought like tigers for her life.

Those last weeks left Penny

too weak to write the book she wanted to dedicate to you and your brother—who seem to think it is all right to smoke. Penny died of cancer which started in her abdomen and spread to her lungs and liver—a choking foe that would not give in to medicine or prayer. During those miserable days, as she grew worse and worse, Dad and I asked many knowledgeable doctors the same question: *Why? Why should Penny have cancer?*

One white-smocked tumor

specialist spoke for them all: "It is a terribly difficult question to answer, because there are hundreds of different types of cancer, and so far we know the direct cause of only a few of them. And one of these, people will not believe."

Won't you believe, Chris? Penny had something she did not want, and she wanted you to know what it could do to you.

Won't you listen to her?

Love,

MOTHER

-
1. Why did Penny's mother write this letter to Chris? Speculate about its effect on him. Do you think he should stop smoking?
 2. What was Penny's bequest? Estimate its value to those who knew her; to you and to others who have read this letter.
 3. How did Linda show her friendship for Penny? What qualities do you admire in Linda? in Penny?
 4. Reread the specialist's answer to the question, "Why should Penny have cancer?" In what ways did he speak for all doctors? Could—or should—he have softened his answer in any way?
 5. According to the specialist, most people refuse to believe that cigarettes cause cancer. Do you think his opinion is correct? If so, how do you explain the people's reaction?
 6. How harmful do you consider cigarettes? Do you believe that they may actually cause cancer? Is your belief strong enough to keep you from smoking?
-

What the Cigarette Commercials Don't Show

HUGH J. MOONEY

To smoke or not to smoke? That's the question only you can answer. Here's the grim reality of the chances smokers take—pictured by a man who has been to cancer country.

In cigarette country, television commercials show two or three handsome, rugged cowboys on beautiful horses. Or there are sports cars, planes or scuba gear. The scene is always one of clean, windswept health. The people have a look of supreme confidence; the lovely girls all smile.

I know another country. It is a land from which few return. In this sad region there are no strong men, no smiling, pretty girls. Executives and store clerks there look very much alike, not only because they wear the same clothes, but because people living on the raw edge of a thin hope somehow get the same haunted expression on their faces.

I am referring to cancer country. I have been there.

I am 44 years old and have a wife and two small children. By 1963, I had a comfortable salary with an insurance firm, and the future seemed bright. In May of that year, I developed a slight difficulty in swallowing. Our family physician said that, if it persisted for another week, he would arrange an appointment for me with a throat specialist. It did persist. The specialist diagnosed it simply as "a case of nerves"—a diagnosis that he was to reaffirm in October. Finally, in January 1964, convinced that it was more than a case of nerves, I entered a hospital. And there

the doctor told me, as gently as he could, that I had cancer of the throat.

The first thing that occurred to me was that I would die and Eileen, my wife, would have to give up the house. What a shame that my children would not be able to grow up in that house! We had bought it only two years before.

The doctor suggested that I enter a well-known Eastern hospital. Two days later, Eileen and I drove there. I was assigned to a four-bed room on the seventh floor of the east wing. This is known as Seven-East.

When I saw the three other patients in my room, I didn't want to believe my eyes. It was suppertime, and the patients were eating. It wasn't much like the campfire scene. The men stood by their beds and carefully poured a thin pink liquid into small glass tubes. Then they held the tubes high over their heads. The fluid drained down out of the tubes through a thin, clear plastic hose which disappeared into one nostril.

They had to eat this way because throat, mouth, tongue

and esophagus had been cut away in surgery. I could actually see the back wall of their gullets—the entire front of the throat was laid open from just below the jaw down almost to the breastbone. Each of them had a large wad of absorbent bandage under his chin to catch the constant flow of saliva pouring out of his throat.

The sight of these "tube feeders" shocked and depressed me more than anything since the day I learned I had cancer. As soon as I had changed into pajamas and robe, I rushed back to the solarium where Eileen was waiting. Shaking, I lit a cigarette and stared about me at all the other patients, some of whom would be dead in a week or so.

The doctor assigned to my case found us there in the solarium. I made it clear to him that I would rather die than be cut up that way. He told me not to think about it, that perhaps such drastic surgery would not be necessary in my case.

A heavy snow was falling outside. Eileen had to leave to drive the 60 miles home. I walked with her to the elevator, pretending a lot more optimism

than I felt. "Drive carefully," I said, and kissed her good-by.

I fled to the solarium, unwilling to face the surgical horrors in my room. Yet everywhere I looked there were patients whose tongues, pharynxes, jaws, throats, chins or noses had been removed. Many of them were waiting for plastic surgery to reconstruct their faces and necks.

For this, it is necessary to grow extra pieces of flesh. Through some sort of surgical miracle these pieces of flesh—called pedicles—can be made to grow anywhere on the patient that the surgeon decides is best. One patient had flesh growing out of the side of his neck in a tubular U, like the handle on a suitcase. Another man had one growing from between his shoulder blades over his right shoulder to a spot in his throat just below the chin. It must have been 18 inches long.

I was torn between horror and pity. What might I look like soon? I reminded myself that surgery might not be necessary, and kept my eyes on the walls, the floor—anywhere but on the other patients.

The television set was on, and the cigarette commercials droned along, extolling the wonderful taste of the product. But these people who had smoked all their lives could no longer taste cigarettes—or anything else. Their food was poured in through plastic tubing. There are no taste buds in plastic tubing.

All the people in the commercials had wonderfully appealing voices, young and vibrant. But the patients around me in the solarium did not have very nice voices. In fact, many had no voice at all; their vocal cords had been cut away.

These voiceless wraiths carried pad and pencil to communicate. Others, whose throat openings had been closed, were able to use an electronic device that looked something like a flashlight. You hold it against your throat, and it picks up vibrations from the section where your vocal cords used to be. It produces a tiny, electronic voice—very faint, but understandable.

Next morning, I was taken to the operating room for a bronchoscopic examination. This is very much like sword-swallow-

ing. You tilt your head back as far as you can, and doctors slide a metal tube through your mouth and all the way down into your trachea. Your gag reflexes go crazy trying to eject this tube, and you find that it is completely cutting off your supply of air. All this time two or three doctors are taking turns looking down the pipe.

Occasionally they take a sample for a biopsy—lowering something down the tube that snips off a specimen of flesh here and there. I passed out from lack of air during the examination and came to back on my bed. I was told not to eat or drink anything and to remain in bed for at least two hours.

In an effort to save my voice, so important in insurance work, it was agreed that radiation treatments would be tried. The treatments were not effective, and in August 1964 the doctors told me that I would have to undergo surgery.

The night before the operation, knowing that I would never speak again, I tried to tell Eileen how much I loved her and the children. She was very brave. The next morning, on my way to the operating room,

I remember praying and repeating the name "Jesus" over and over. It seemed somehow right that this should be my last spoken word.

Eleven hours later, I was brought back to my room. Except for an hour in the recovery room, I had spent all that time on the operating table. Next day, I learned that the surgeons had removed my larynx, my pharynx, part of my esophagus and a few other random bits and pieces. I was now one of those "surgical freaks" whose appearance had so shocked me some months before. From this time on, I would breathe through a hole at the base of my throat called a stoma.

Knowing how odd my open throat made me appear, I felt completely cut off from humanity—a mere biological specimen. It was a difficult and lonely period of adjustment. Eight subsequent operations were required to reconstruct the front of my neck. Television helped pass the time. All of us there in Seven-East were, I confess, morbidly fascinated by the cigarette commercials. After smoking approximately 19,000 packs of cigarettes, I—

we all—had turned out a bit different from those handsome fellows and beautiful young women.

Young people today are great believers in realism. It might be interesting, therefore, if some advertising agency were to do a cigarette commercial featuring a patient who has lost his throat to cancer caused by smoking. They could choose a man growing one of those flesh pedicles. Or the camera might slowly pan around the room, showing all of us still faithfully smoking brand X or brand Y—those of us who still had a com-

plete mouth to put a cigarette into. They might even show the one total addict I met who smoked by holding his cigarette to the hole that led into his windpipe, through which he breathed air into his lungs.

We don't ride horses or helicopters or sports cars in Seven-East. We ride wheeled tables to the operating room, and if we're lucky we ride them back. Seven-East is only a part of cancer country. They treat lungs on the third floor. I thank God that I have not yet had to visit there.

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1. Why do young people smoke? What do you consider the advantages, if any, of smoking? the disadvantages?
 2. How safe do filter tips make cigarette smoking? What does recent research say on this matter?
 3. In your opinion, how much influence does cigarette advertising have on young people? Do you think government controls are desirable? Explain your viewpoint.
 4. What efforts are tobacco companies making to increase the safety of smoking? Speculate about results of their efforts.
 5. What do you think was the writer's purpose in telling about his experience in cancer country? How well does he succeed in his purpose? Do you consider the article effective? Why?
 6. What has been your personal experience, if any, with smoking? Based on your experience, what advice would you offer a younger person? Would you encourage or discourage his forming the habit? Why?
-

More Bad News for Smokers

GERHARD ANGERMANN

Smokers, beware! Air pollution is more dangerous for you than for nonsmokers. What alternatives do you have?

I've been off cigarettes for nearly ten years. I'm glad I quit, because lately I've heard nothing but bad news for the smoker—including disturbing reports that air pollution is even worse for the smoker than for the nonsmoker.

According to researchers at Albany State University's Atmosphere Sciences Research Center, the hot gases in tobacco smoke interfere with the normal cleansing mechanism of the lungs. When foreign matter is inhaled from polluted air, it is pushed back up the bronchial tree from the lungs with a mucus blanket which is activated by the whipping action of tiny hairs, called cilia, on the inner lining of the lungs. The operation works something like an escalator. When the debris reaches the throat, it is harm-

lessly swallowed or coughed out.

In the case of the smoker, however, the hot gases from his smoke throw this cleansing mechanism out of kilter. All the debris that would have been escalated out of the lungs piles up along their inner surfaces.

Cigarette smoke slows and even stops the lungs' cleansing action. In the average smoker, to say nothing of the chain smoker, the cleansing mechanism doesn't get any real chance to revive except when he is asleep. By morning, he has such an accumulation of mucus in his lungs that he has to resort to coughing to eliminate it.

And even coughing doesn't entirely do the job. Inevitably, the clogged-up passages in the lungs provide an excellent breeding ground for infection.

At the same time, the continued effects of the incompletely cleansed lungs and harmful chemicals in the smoke itself result in the destruction of millions of lung cells and in the development of respiratory diseases such as chronic bronchitis and emphysema, or even lung cancer.

A contributing factor in this lung damage, according to Dr. Alton Ochsner, pioneer in studies linking smoking with lung cancer, may be the constriction of capillaries in the lungs through the action of nicotine. This constriction prevents blood from assisting properly in the repair of damaged tissue.

But smoking does more than interfere with the lungs' cleansing mechanism. It now appears that the very act of smoking makes air pollution more dangerous. The Albany research group has found that when polluted air is drawn through the heat zone of the cigarette, solid elements are vaporized. Thus they are able to pass through physical barriers, such as a cigarette filter, and into the

lungs. The smoker's lungs are therefore bombarded not only by the chemicals from his smoke, but also by chemical vapors from the polluted air.

"You'll find," says Alfred Halstrunk, director of the team, "that none of the scientists here smoke, and probably 90 percent of the 250 researchers don't smoke either."

Other researchers have begun to take second looks at the statistics involving respiratory disease and death among workers in coal and uranium mines, and in asbestos plants. Respiratory diseases among such workers are much less common among nonsmokers.

The alternatives for the smoker who seeks protection from air pollution are pretty bleak. He can: cut down on his smoking when the air-pollution index is high; confine his smoking to his air-conditioned office or automobile; space his smoking to give his cilia a chance to revive between cigarettes; move to a place with clean air.

As a last resort, of course, he can always give up smoking.

SAFETY HAZARDS AND HELPS

—And Sudden Death

J. C. FURNAS

Few articles have made a greater impression on readers than this one, which appeared first in the August 1935 issue of *The Reader's Digest*. Among those requesting the Digest to reprint it is Susan Langland, who was a freshman at Tulane University in 1966 when she wrote: "Like most American teenagers, I have more or less grown up riding in automobiles. Perhaps this is why I often exceeded the speed limit without giving it a second thought. I drive fairly carefully, so the possibility of an accident seemed rather remote. Then I read an article which made the consequences of even the remotest possibility too horrible to risk. . . . I want to thank you for possibly saving my life." And here is the famous article, perhaps to help you sometime.

Publicizing the total of motoring injuries never succeeds in jarring the motorist into a realization of the appalling risks of motoring. He does not translate dry statistics into a reality of blood and agony.

Figures* exclude the pain and horror of savage mutilation—which means they leave out the point. They need to be brought closer home. A passing look at a bad smash or the news that a fellow you had lunch with last week is in a hospital with a

*In 1969, 2,000,000 were injured; 56,400 were killed.

broken back will make any driver but a born fool slow down at least temporarily. But what is needed is a vivid and *sustained* realization that every time you step on the throttle death gets in beside you, waiting for his chance. That horrible accident you may have witnessed is no isolated horror. That sort of thing happens every hour of the day, everywhere in the United States.

A judge now and again sentences reckless drivers to tour the accident end of a city morgue. But even a mangled

body on a slab, waxily portraying the consequences of bad motoring judgment, isn't a patch on the scene of the accident itself. No safety-poster artist would dare depict that in full detail.

That picture would have to include motion-picture and sound effects, too—the flopping, pointless efforts of the injured to stand up; the queer, grunting noises; the steady, panting, groaning of a human being with pain creeping up on him as the shock wears off. It should portray the slack expression on the face of a man, drugged with shock, staring at the Z-twist in his broken leg, the insane crumpled effect of a child's body after its bones are crushed inward, a realistic portrait of an hysterical woman with her screaming mouth opening a hole in the bloody drip that fills her eyes and runs off her chin. Minor details would include the raw ends of bones protruding through flesh in compound fractures, and the dark-red oozing surfaces where clothes and skin were flayed off at once.

Those are all standard, every-

day sequels to the modern passion for going places in a hurry and taking a chance or two on the way. If ghosts could be put to a useful purpose, every bad stretch of road in the United States would greet the oncoming motorist with groans and screams and the educational spectacle of ten or a dozen corpses, all sizes, sexes and ages, lying horribly still on the bloody grass.

Last year a state trooper of my acquaintance stopped a big red car for speeding. Papa was obviously a responsible person, obviously set for a pleasant weekend with his family—so the officer cut into Papa's well-bred expostulations: "I'll let you off this time, but if you keep on this way you won't last long. Get going—but take it easier." Later a passing motorist hailed the trooper and asked if the red car had got a ticket. "No," said the trooper, "I hated to spoil their party." "Too bad you didn't," said the motorist. "I saw you stop them—and then I passed that car again 50 miles up the line. It still makes me feel sick at my stomach. The car was all folded up like an accordion. They were all dead

but one of the kids—and he wasn't going to live to the hospital."

Maybe it will make you sick at your stomach, too. But unless you're a heavy-footed incurable, a firsthand acquaintance with the results of mixing gasoline with speed and bad judgment ought to be well worth your while. I can't help it if the facts are revolting. If you have the nerve to drive fast and take chances, you ought to have the nerve to take the appropriate cure. You can't ride an ambulance or watch the doctor working on the victim in the hospital, but you can read.

The automobile is treacherous. It is tragically hard to realize that it can become a deadly missile. As enthusiasts tell you, it makes 65 feel like nothing at all. But 65 miles an hour is 100 feet a second, a speed which puts a viciously unjustified responsibility on brakes and human reflexes, and can instantly turn this docile luxury into a mad bull elephant.

Collision, turnover or side-swipe, each type of accident produces either a shattering dead stop or a crashing change of direction, and, since the oc-

cupant—meaning you—continues in the old direction at the original speed, every surface and angle of the car's interior immediately becomes a battering, tearing projectile, aimed squarely at you—inescapable. There is no bracing yourself against these imperative laws of momentum.

Anything can happen in the split second of crash, even those lucky escapes you hear about. People have dived through windshields and come out with only superficial scratches. They have run cars together head on, reducing both to twisted junk, and been found unhurt and arguing bitterly two minutes afterward. But death was there just the same—he was only exercising his privilege of being erratic. This spring a wrecking crew pried the door off a car which had been overturned down an embankment, and out stepped the driver with only a scratch on his cheek. But his mother was still inside, a splinter driven four inches into her brain as a result of son's taking a greasy curve a little too fast. No blood—no horribly twisted bones—just a gray-haired

corpse still clutching her pocketbook in her lap as she had clutched it when she felt the car leave the road.

On that same curve a month later, a light touring car crashed into a tree. In the middle of the front seat they found a nine-month-old baby surrounded by broken glass and yet absolutely unhurt. A fine practical joke on death—but spoiled by the baby's parents, still sitting on each side of him, instantly killed by shattering their skulls on the dashboard.

If you customarily pass without clear vision a long way ahead, make sure that every member of the party carries identification papers—it's difficult to identify a body with its whole face bashed in or torn off. The driver is death's favorite target. If the steering wheel holds together, it ruptures his liver or spleen so he bleeds to death internally. Or, if the steering wheel breaks off, the matter is settled instantly by the steering column's plunging through his abdomen.

By no means do all head-on collisions occur on curves. The modern death trap is likely to be a straight stretch with three

lanes of traffic. This sudden vision of broad, straight road tempts many an ordinarily sensible driver into passing the man ahead. Simultaneously a driver coming the other way swings out at high speed. At the last moment each tries to get into line again, but the gaps are closed. As the cars in line are forced into the ditch to capsize or ram fences, the passers meet, almost head-on, in a swirling, grinding smash that sends them caroming obliquely into the others.

A trooper described such an accident—five cars in one mess, seven killed on the spot, two dead on the way to the hospital, two more dead in the long run. He remembered it far more vividly than he wanted to—the quick way the doctor turned away from a dead man to check up on a woman with a broken back; the three bodies out of one car so soaked with oil from the crankcase that they looked like wet brown cigars and not human at all; a man, walking around and babbling to himself, oblivious of the dead and dying, even oblivious of the daggerlike sliver of steel that stuck out of his streaming

wrist; a pretty girl with her forehead laid open, trying hopelessly to crawl out of a ditch in spite of her smashed hip. A first-class massacre of that sort is only a question of scale and numbers—seven corpses are no deader than one. Each shattered man, woman or child who went to make up the fatality statistics chalked up last year had to die a personal death.

A car careening and rolling down a bank, battering and smashing its occupants every inch of the way, can wrap itself so thoroughly around a tree that front and rear bumpers interlock, requiring an acetylene torch to cut them apart. In a recent case of that sort, they found the old lady, who had been sitting in back, lying across the lap of her daughter, who was in front, each soaked in her own and the other's blood indistinguishably, each so shattered and broken that there was no point whatever in an autopsy to determine whether it was a broken neck or ruptured heart that had caused their sudden deaths.

Overturning cars specialize in certain injuries. Cracked pel-

vis, for instance, guaranteeing agonizing months in bed, motionless, perhaps crippled for life—broken spine resulting from sheer sidewise twist—the minor details of smashed knees and splintered shoulder blades caused by crashing into the side of the car as she goes over with the swirl of an insane roller coaster—and the lethal consequences of broken ribs, which puncture hearts and lungs with their raw ends. The consequent internal hemorrhage is no less dangerous because it is the pleural instead of the abdominal cavity that is filling with blood.

Glass contributes its share to the spectacular side of accidents. Even safety glass may not be wholly safe when the car crashes into something at high speed. You hear picturesque tales of how a flying human body will make a neat hole in the stuff with its head—the shoulders stick—the glass holds—and the raw keen edge decapitates the body as neatly as a guillotine.

Or, to continue with the decapitation motif, going off the road into a post-and-rail fence can put you beyond worrying

about other injuries immediately when a rail pierces the windshield and tears off your head with its splintery end—not as neat a job but just as efficient. Bodies are often found with shoes off and feet broken out of shape. The shoes are on the floor of the car, empty and with laces still neatly tied. That is the kind of impact produced by modern speeds.

But all that is routine in every American community. To be remembered individually by doctors and policemen, you have to do something as grotesque as the lady who burst the windshield with her head, splashing splinters all over the other occupants of the car, and then, as the car rolled over, rolled with it down the edge of the windshield frame and cut her throat from ear to ear. Or park on the pavement too near a curve at night and stand in front of the tail light as you take off the spare tire—which will immortalize you in somebody's memory as the fellow who was mashed three feet broad and two inches thick by the impact of the heavy-duty truck against the rear of his own car. Or be as original as

the two youths who were thrown out of an open roadster—thrown clear—but each broke a windshield post with his head in passing, and the whole top of each skull, down to the eyebrows, was missing. Or snap off a nine-inch tree and get impaled by a branch.

None of all that is scare-fiction; it is just the horrible raw material of the year's statistics as seen in the ordinary course of duty by policemen and doctors, picked at random. The surprising thing is there is so little dissimilarity in their stories.

It's hard to find an accident victim who can bear to talk. After you come to, the gnawing, searing pain throughout your body is accounted for by learning that you have both collarbones smashed, both shoulder blades splintered, your right arm broken in three places and three ribs cracked, with every chance of bad internal ruptures. But the pain can't distract you, as the shock begins to wear off, from realizing that you are probably on your way out. You can't forget that, not even when they shift you from the ground to the

stretcher and your broken ribs bite into your lungs and the sharp ends of your collarbones slide over to stab deep into each side of your screaming throat. When you've stopped screaming, it all comes back—you're dying and you hate yourself for it.

And every time you pass on a blind curve, every time you hit it up on a slippery road, every time you step on it harder than your reflexes will safely take,

every time you drive with your reactions slowed down by a drink or two, every time you follow the man ahead too closely, you're gambling a few seconds against blood and agony and sudden death.

Take a look at yourself as the man in the white jacket shakes his head over you, tells the boys with the stretcher not to bother and turns away to somebody else who isn't quite dead yet. And then take it easy.

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1. What is your impression of this article? How may reading it be of help to you?
 2. Do you agree with the writer that the automobile is treacherous? Explain. Is it any less treacherous today than it was in 1935?
 3. What are today's safety features, such as shatterproof glass and safety harnesses? How much do they help?
 4. Are highway death traps today any different from those described by the writer? Do you think there are more or fewer death traps than there were in 1935?
 5. Summarize the rules-of-the-road that the writer has so dramatically illustrated as essential for safe driving. What rules would you add to the list?
 6. Speculate about why drivers speed. Do you think a driver is justified in trying to prove that he is not "chicken"? What recourse, if any, do passengers have in a speeding car?
 7. What experiences of your own, or of someone you know, does this article bring to mind? Share them.
-

What Would You Do in These Driving Emergencies?

C. LESTER WALKER

It was a fine summer's day, and I was driving along the turnpike in the right-hand north-bound lane. The car nearest me, about 100 feet ahead, was a blue convertible, rolling along two lanes to my left, at about 55 m.p.h., a woman driving. Suddenly I heard the "bang" of a blowout, and the convertible shot to the right, crossed two traffic lanes and went off the pavement onto the shoulder. In a moment, it lunged back onto the road, rocketed left across three lanes, over the median strip, and crashed into a car headed south.

Later, from a state trooper, I learned that the convertible's driver had been killed. "It was her first blowout—on the last

day of her life," the trooper said. "But if she'd known the right things to do in that emergency, she'd be alive today. Would you know what to do in that same situation, mister?"

Appalled, I realized that I *wouldn't* know. Would you?

Do you know what to do if your brakes fail going downhill, or an oncoming car swerves out of control into your lane? Test yourself on the eight situations described on next pages, and check your answers against those beginning on page 124.

What your responses *should* be in such emergency situations is no longer guesswork. Research by highway patrols, universities and insurance companies has established beyond

dispute the best maneuvers. They aren't necessarily one's instinctive reactions. But *they can be learned by being practiced in the imagination over and over again.* When sitting in your car in your driveway, confront your mind's eye with each crisis, and rehearse your reac-

tions until they become automatic. "If you do this," a leading safe-driving expert declares, "you will be ready for those crucial emergencies. For even if, of all you've learned, you recall merely the one thing you must *not* do, that, in many instances, can save your life."

What Would You Do in These Driving Emergencies?

1. You're going 60 on an expressway. Suddenly, *bang!*—followed by a violent tug to the right on your steering wheel. Your right front tire has blown out. What do you do?

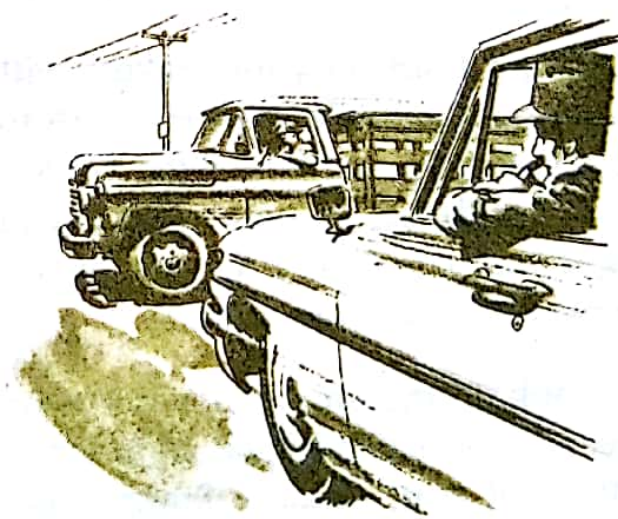
2. Driving about 50 at night, you come unexpectedly upon a sharp, unbanked curve to the right. As you try to angle into it, you sense that the curve is too sharp for you to hold the car on the road.

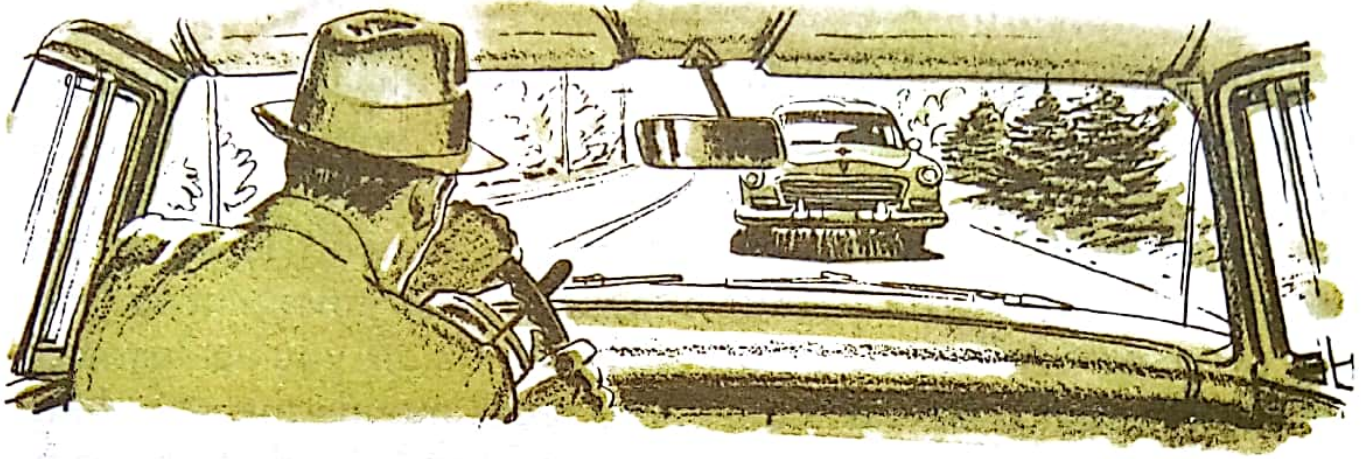
3. Rolling downhill, gaining speed, you step on your brake pedal. It "mushes" lifelessly to the floor—no brakes!

4. A traffic light on the highway ahead turns red faster than

you expected, and you stop quickly. Behind you, brakes screech. In your mirror you glimpse a truck. In a couple of seconds it's going to plow into the rear of your car.

5. A farm truck shoots out of a lane on the right and starts across the road directly in front of you. You've been doing 50, and are almost on him.





6. An oncoming car zigzags into your lane on a two-lane highway and, weaving slightly, suddenly heads like a missile directly for you.
7. Driving along at 50 on wet blacktop, you try to dodge a hole in the pavement. The rear of your car starts skidding hard to the right.
8. A car, trying to pass you, forces you to swerve right. Your right wheels drop over the edge of the pavement onto the soft shoulder several inches below. You're doing 60.

ANSWERS

1. Don't panic; you can handle a blowout at any speed if you know how. *Don't brake*; that will only compound your steering difficulties. Grip the wheel hard, and *steer straight*; if you yank the car counter to its swerve, you might turn over. Give a little gas—on, off, on, off, lightly. This tends to restore steering control. When you've slowed down, lightly apply your brakes until you can safely turn off the road.
2. Don't slam on your brakes; with your front wheel turned so sharply, you could roll over. Instead, drift to the left side of the road (if no vehicle is coming) so you'll take the curve in a wider arc. At the same time, apply your footbrake in light spurts with your *left* foot while you maintain a light but constant pressure on the gas with your right (wheels under power hold a curve better).
3. Yank on the emergency brake with all your might. And shift to a lower gear if you have a stick shift—in order to take advantage of the braking effect of your engine. Pump your brake pedal up and down fast; this

sometimes restores some braking power. As a last resort, if you're not slowing down, check your car by deliberately bumping it against roadside guardrails, hedges, fences, stone walls or even parked cars. You'll smash fenders and rip off paint, but eventually you'll stop—bruised maybe, but alive. Or, if absolutely necessary, "hit the ditch" at the likeliest soft spot.

4. Take your foot off the brake pedal. Then either throw yourself across the front seat or slump way down in the seat behind the steering wheel, so your head is supported by the backrest and won't be "whiplashed" when the truck strikes. Immediately after the impact, put your foot on the brake again if you can, so you won't roll into cross-traffic.

5. Slam on your footbrake and hold straight. Then let up a bit on the brake and swerve right, to pass *behind* the leftward-moving truck. *Don't swerve left*—that would put you in the truck's path. Don't hesitate to run off the road if you have to in order to miss the truck.

6. Blast your horn; the driver may be asleep. Hit your brakes and head off the road to the right; you may change the head-on collision into a less-dangerous "sideswipe." And keep going—to get out of the other car's reach. But if there is no time, in the crucial last second flip off your ignition to lessen chances of fire, and throw yourself onto the seat (or person) to the right, away from the steering wheel. Curl your legs tight to your torso and your arms to your chest.

7. Don't slam on your brakes, for if you lock your wheels you'll lose all control. Instead, turn but don't jerk your steering wheel to the right, *into* the skid, and simultaneously let up on the gas pedal. Once steering has corrected the skid, apply your brakes gently, *in on-off touches*, to slow down.

8. Don't slam on your brakes or try to twist back onto the pavement immediately—that could turn you over. Hold hard onto the steering wheel, let up on the gas, steer the right wheels down the shoulder and gently "fan" your brakes on and off. When you've slowed down, remount the pavement.

Condensed from *What Would You Do in These Driving Emergencies?*
The Reader's Digest, September '62 (from *Discovery*,
The Allstate Motor Club Magazine)

Six things you must do—four things you need not do

If You Have an Accident

PAUL W. KEARNEY

A neighbor of mine recently had his driving license suspended simply because he didn't know what to do *after* he had an auto accident. Involved in a property-damage mishap, he failed, before leaving the scene, to give the other driver the information required by law. Also, since no personal injury was involved, he believed it was unnecessary to report the incident to the police. The other man knew the law and reported the accident. Thus, an episode that should have involved only minor annoyance has caused my friend unnecessary trouble and expense.

Do you know exactly what you should do in such a situation? Last year some 20 million drivers faced this question. If you don't know the answer, your insurance coverage may be in jeopardy, as well as your license.

Here are six things you must do right away:

1. **Stop immediately**, as close to the scene as possible without blocking traffic. If the vehicles can't be moved out of the traffic lanes, put out flares or some other warning, or enlist bystanders to flag down oncoming cars. Turn off the ignition. Since gasoline may be leaking, do not smoke.

2. **Count ten before saying anything.** Time and again trivial accidents have ended in brawls, even in manslaughter cases, because tempers flared. So, *don't argue*. Leave the establishment of blame to the police and your insurance company.

3. **Get assistance for the injured.** Except to avoid further injury, do not move anyone who may be hurt. Call an ambulance rather than a doctor; it is equipped to afford the best emergency care. Unless you are

a trained first-aider, the less you do for the injured, the better off they are likely to be.

4. Notify police immediately if anyone has been injured, or if property damage appears to exceed the legal minimum in the state where the accident occurred. (In Oregon, any property damage makes a report mandatory.)

5. Exchange identification with the other driver. You are both required to show your licenses for verification. Give the other person the name of your insurance company, but don't reveal the amount of coverage you hold. Be sure to get the names and addresses of all occupants of the other car and to note their apparent physical condition.

The importance of this latter point was brought home to me by the experience of a friend whose car was hit while she was stopped for a red light. The other driver was most apologetic, admitted his fault, exchanged identification—and then drove on. Several weeks later, my friend received notice that she was being sued for

\$12,000 for injuries to three passengers in the other car. She was sure there had been only one passenger, but she hadn't checked. Eventually her insurance company settled the claim out of court.

6. Make a record of all pertinent facts. If a police officer is at, or comes to, the scene, take down his name, badge number, and precinct or barracks, especially if the other driver was at fault. (Your insurance company will want to get in touch with him.) If you suspect that the other driver has been drinking—and at least 50 percent of all motor-vehicle accidents today involve a drinking driver—demand that the police give both of you a chemical test. If no testing facilities are available, ask the officer to note your request in his report.

Try to write down all the essential circumstances: date, hour, location, visibility, weather and road conditions, status of traffic-control devices, direction each car was going, estimated speeds. Draw a diagram showing the type of intersection, if any; the point of impact; the position of the cars

when they came to rest. Most insurance companies provide printed forms for this; keep several in your glove compartment. If anyone is taken to a hospital, get its name and location.

The importance of making a detailed record is twofold. Many months after the accident you may have to go to court, and by then the details are likely to be hazy in your memory. In addition, you must report to your insurance company and to the state motor-vehicle bureau, the latter within 24 hours to 15 days, depending on the state. A report is *mandatory* if there was any personal injury, minor or major, or if property damage exceeds a specified sum.

Your report to your insurance company should be comprehensive; if you were at fault, say so. If you receive a communication of any sort from the other party, his lawyer or insurance company, forward it immediately to your insurance company for handling.

Here are four things you are not required to do in the event of an accident:

1. **You need not furnish full details to the police.** You are required to tell the police—either at the scene or at the station house—only your name, address and license number. Any other information you volunteer can be used against you later. If you are detained for questioning, you have every right to decline to answer any other questions until you have consulted an attorney.

2. **You need not admit fault.** Even if you are in the wrong, insurance companies urge strongly that you make no such admission publicly. This is a precaution against saying anything that can be twisted to your disadvantage later.

3. **You are not required to sign anything at the scene for anybody.** Do not make any statements to alleged “investigators” or johnny-on-the-spot lawyers. Recently in New York, runners for seven different lawyers followed an accident victim to the hospital. When they got through with her, she had signed away 105 percent of any damages she might conceivably collect later.

4. You are not required to state whether or not you are hurt. Do not make any statements at the scene regarding your physical condition. If anyone wants to know if you've been hurt, just say, "I'm not sure—I won't know until I have seen a doctor."

It is sad that an accident,

with all its attendant inconvenience or worse, should call for such legalistic action on the part of its victims. But the fact is that both parties are not necessarily persons of good will. So if the worst does happen, be courteous, coöperative and reasonable. *But don't be naïve!*

Condensed from *If You Have an Accident*
The Reader's Digest, January '65 (from Family Safety)

Thumbs Down on Hitchhiking!

BILL SURFACE

Besides admiration for its aptness, what's your reaction to the title? Indignation? Approval? Surprise? Maybe you like to hitchhike. Or, if you drive, maybe you like to pick up strangers who are thumbing a ride. Hitchhiking has never been more popular—or more dangerous. Consider the frightening facts.

Near Summerville, Georgia, a textile worker chose to ignore scary warnings about hitchhikers when two polite teenagers, standing outside a restaurant on Christmas Eve, pleaded that they needed to reach their homes "right down the road." Result: they pulled knives and ordered him to drive to Lookout Mountain. When he struggled with one of them for the knife, he was cut severely in the neck and head before the

two fled.

Grim incidents like this are occurring with increasing frequency as unprecedented numbers of hitchhikers throng the nation's highways. Romanticized in movies and folk music, hitchhiking has become particularly popular among the young and the venturesome. Incredibly, some coeds at the universities of Eastern Michigan and Michigan continued to hitchhike while the murder and mu-

tilation of seven girls near the universities remained unsolved.

Nobody can separate the potentially dangerous from the well-meaning hitchhiker until it is too late. "Few vicious hitchhikers look like criminals," cautions FBI Director J. Edgar Hoover. "And that makes giving a ride to any stranger as reckless as passing another car on a sharp curve."

The hitchhiking hazard can also run in the other direction. After getting into a car, decent hitchhikers sometimes find themselves at the mercy of a sex deviate or criminal in the driver's seat. Indeed, many perverts drive the streets for the sole purpose of picking up hitchhikers. Police across the country indicate that the one common factor in many unsolved cases involving people found sexually molested and murdered along rural roads is that they "liked to hitchhike."

Even if motorists have no criminal intentions, people are periodically killed or injured when other drivers crash into the rear of automobiles stopping unexpectedly for hitchhikers. And some hitchhikers

are killed after obtaining a ride with intoxicated drivers. (Something else to think about: In most states, drivers are liable for any injuries suffered by passengers, including hitchhikers.)

Despite the growing number of criminals preying on motorists, anyone can, at this writing, still legally hitchhike in Maryland, Michigan, Missouri, Nebraska, South Dakota and Vermont. More important, criminals find it simple to circumvent almost every anti-hitchhiking law there is. Usually, the state law stipulates: "No person shall stand *in* a roadway for the purpose of soliciting a ride..." Thus, if a hitchhiker remains on the unpaved shoulder of the road, he can thumb away at will. However, in most states it is now illegal for individuals to walk along controlled-access highways, such as the interstate highway system, its shoulders or ramps, except in cases of emergency. Nevertheless, hitchhikers continue to saunter onto the interstates, fully aware that their most likely punishment is a scolding from the police and an order to leave the highway immediately.

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1. How convincing do you find the writer's arguments against hitchhiking? Have they altered your previously held views on this subject? If so, in what ways?
 2. "You can tell by a hitchhiker's looks whether or not it is safe to pick him up." True or false? Give reasons for your answer.
 3. What is your opinion of the advisability of accepting rides from strangers? Evaluate what the writer has to say on this subject.
 4. How effective are present anti-hitchhiking laws? Explain.
 5. What kind of anti-hitchhiking laws, if any, do you advocate for your state? What laws does it have at present?
 6. If you have had hitchhiking experiences, would you consider them lucky or unlucky? What chances did you take?
 7. How would you answer this argument: "Risk or no risk, I'm going to hitch a ride because I don't have carfare." Points to consider: How important is the trip? Is there another way to get a ride? Is hitchhiking worth the danger involved?
-

Condensed from *Thumbs Down on Hitchhiking!*
The Reader's Digest, January '70 (from Family Safety)

First Steps in First Aid

Edited by LOIS MATTOX MILLER

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When someone is injured or suddenly becomes ill there is a critical period—before medical help arrives—that is of the utmost importance to the victim. What you do—or what you *don't* do—in that interval can mean the difference between life and death.

First aid is the help that you can provide until *medical aid* takes over. You owe it to yourself, your family and your neighbors to know and understand the simple procedures which can be applied, quickly and intelligently, in an emergency.

1. Don't move an injured person (particularly if the injuries are the result of a fall, crash or other violence) unless it is absolutely necessary to save him

from further danger. Don't turn or manipulate him; don't lift or pull him from a wrecked automobile; don't encourage him to sit up. If he has been injured internally, or if his spine is broken, unnecessary movement may kill or cripple him.

2. Act fast if the victim is bleeding severely (See page 133), or if he has swallowed poison or if he has stopped breathing because of drowning, gas poisoning or electric shock (See page 134). Every second counts. A person may, for example, die within three minutes of the time breathing stops, unless given artificial respiration.

3. Because life-and-death emergencies are rare, in most cases you can start first aid with this step: Keep the patient

lying down, quietly. If he has vomited—and there is no danger that his neck is broken—turn his head to one side to prevent choking. Keep him warm with blankets or coats, but don't over-heat him or apply external heat.

4. Summon medical help. If possible, have someone call the doctor while you apply first aid. The doctor should be told the nature of the emergency, and asked what to do pending his arrival.

5. Examine the patient gently. Cut clothing, if necessary, to avoid movement or added pain. Don't pull clothing away from burns (See page 136).

6. Reassure the victim, and try to remain calm yourself. Your calmness can allay his fear and panic, and convince him that everything is under control. Such reassurance may lessen shock and hasten recovery.

7. Always expect and be ready to treat shock (See page 137).

8. Don't force fluids on an unconscious or semiconscious person—fluids may enter his windpipe and cause strangulation. Don't try to arouse an unconscious person by slapping, shaking or shouting. Don't give alcohol to any first-aid patient.

BITES—ANIMAL

Wash the wound immediately under running tap water to flush out the animal's saliva. Then wash the wound for five minutes with a gauze dressing and plenty of soap and water. Rinse thoroughly with running water and cover with a dressing.

Consult a doctor immediately. He will treat the wound more effectively

and decide measures to guard against rabies and tetanus infection.

If the bite is from an unknown dog or cat, try to have the animal caught and turned over to the police or health department for observation. If the animal disappears, or if observation shows that it has rabies, the victim must have a series of anti-rabies injections.

BITES—ANT, CHIGGER, MOSQUITO

Wash the affected parts with soap and water. Apply a paste made of baking soda and a little water, or use calamine lotion. (Chiggers don't attach themselves firmly for an hour or more.

Scrubbing with a brush and soapy water promptly after exposure should remove them.) Cover the bite with a cloth saturated with ice water if there is swelling.

BITES—TICK

Usually you can dislodge an embedded tick with a few drops of turpentine, or by applying to the insect a heated

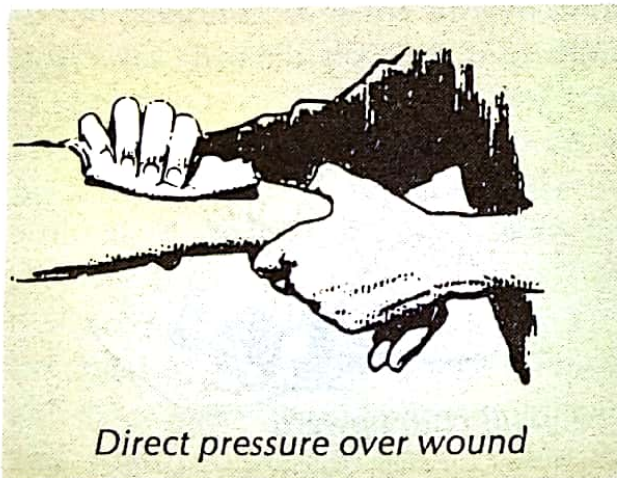
needle or the lighted end of a cigarette. Otherwise, *don't* tear the tick loose. Cover it with heavy oil, Vaseline

or other petroleum jelly to close its breathing pores; usually this will cause it to disengage within a half hour. If this doesn't work, remove the tick with tweezers, working gently and slowly so that you don't crush the insect and so that all parts of its head come loose.

(Avoid touching ticks with your hands.) Then scrub the area with soap and water for five minutes. Ticks can transmit several diseases, but usually don't if removed promptly. If the bite becomes inflamed and swollen, or if the patient has fever, notify the doctor.

BLEEDING—SEVERE

1. Have victim lie down to prevent fainting. To stop the bleeding, press a sterile gauze dressing (or a sanitary napkin, freshly laundered towel or the cleanest thing at hand) firmly over the wound with your whole hand. If the dressing becomes saturated with blood, lay a fresh dressing directly over the saturated one and continue pressure.



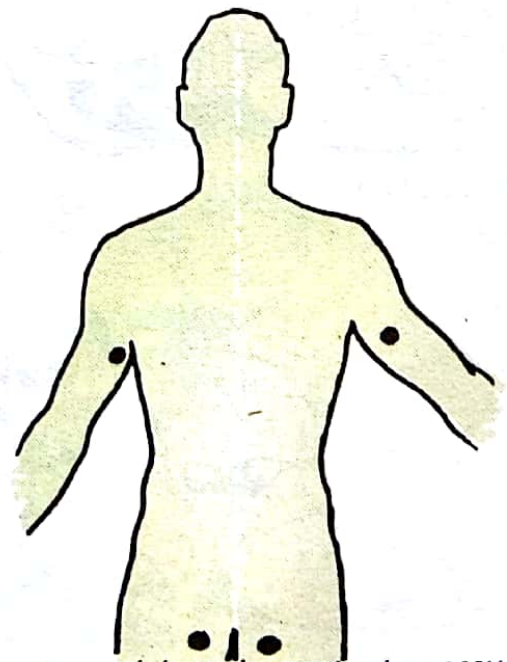
Direct pressure over wound

2. If bleeding from an arm or leg cannot be stopped by direct pressure over the wound, try shutting off circulation in the artery supplying the blood by pressing firmly against it with the palm of your hand. There are four points (See illustration) where arterial pressure is practical for first-aiders. But don't try arterial pressure for wounds of the head, neck or torso. Don't at-

tempt to use a tourniquet unless you have had special training in its use.

3. When the bleeding has stopped, bandage the dressings in place—firmly, but not so tightly that you can't feel the pulse below or beyond the wound. Call the doctor, and leave the cleaning and treatment of the wound to him. Watch carefully for signs of shock (See page 137).

To avoid infection, you shouldn't touch any wound with any unsterilized covering or your unscrubbed hands. But in an emergency you may have no choice. The average adult has five to



Location of four important pressure points to stop arterial bleeding

six quarts of blood; loss of more than two or three pints can be serious. So

you may have to act fast and use whatever is available.

BREATHING STOPPED—ARTIFICIAL RESPIRATION

Watch the patient's chest. If he is not breathing—whether from drowning, choking, electric shock, chemical fumes or asphyxiation, or from any other cause—apply mouth-to-mouth breathing. Act fast. *Caution:* in *electric shock*, first make sure that contact with current has been broken.

1. If there is gas or smoke present, move the victim to fresh air. Lay him on his back. Wipe any foreign matter out of his mouth with your fingers.

2. Place one hand under his neck and lift. Tilt the head back as far as possible by holding the crown of the

head with your other hand.

3. Pull his chin upward until the head is tilted back fully.

4. Place your mouth firmly over the victim's mouth, pinch his nostrils shut, and blow hard enough to make his chest rise. With a small child, place your mouth over his *nose and mouth* when blowing.

5. Remove your mouth and listen for the sound of exhaled air. Repeat the blowing effort. If there is no air exchange, recheck the victim's head and jaw position. His tongue may be blocking air passage. Try again.



1. Tilt head far back



2. Pull chin upward



3. Pinch nostrils and blow



4. Check exhalation

6. If you still get no air exchange, turn the victim on his side and slap him sharply several times between the shoulder blades in order to dislodge any foreign matter from the throat. If the victim is a child, hang him momentarily head-downward over your arm or lap and slap him sharply between the shoulder blades. Wipe his mouth clear.

7. Resume mouth-to-mouth breathing. For adults, blow one vigorous breath every five seconds. For small children, blow shallow breaths, one every three seconds. If you prefer, place

a handkerchief over the victim's mouth (or nose) and blow through it. Don't give up until the victim begins to breathe. Many persons have been revived only after hours of artificial respiration.

8. Call a doctor or ambulance as soon as possible. Place blankets or coats under and over the victim for warmth. When he revives, don't let him get up for at least an hour. All the body, including the heart, is starved for oxygen, and if the victim gets up too soon, there is danger of serious collapse.

BROKEN BONES

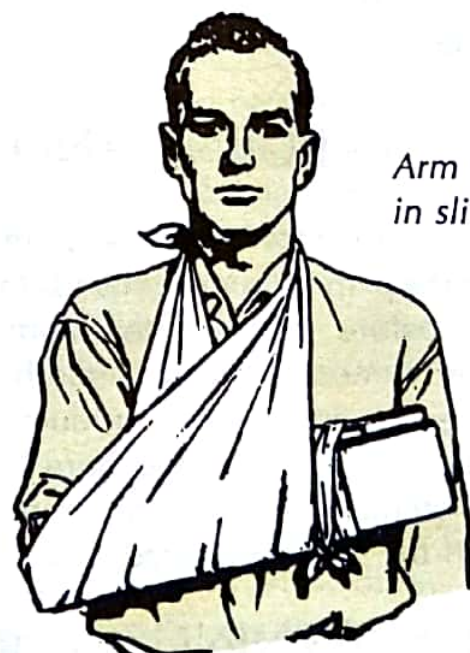
While waiting for the doctor, keep the patient warm, and treat for shock (See page 137) if necessary. Apply an ice bag to the painful area. If the broken bone protrudes through the skin and there is severe bleeding, stop the bleeding (See page 133), but do not attempt to push the bone back in place. Make no attempt to clean the wound. Wait for medical aid.

If no doctor is available and the victim must be moved to receive medical aid, the fracture should be immobilized with splints to prevent further damage. For splints, use anything that will keep the broken bones from moving—news-papers or magazines for arms, broom-sticks or boards for legs. Make the splints long enough to reach beyond the joint both above and below the break.

If the limb must be straightened before splints can be applied, support the limb with a hand on either side of the break while someone gently eases it

into a position as nearly natural as possible. Pad improvised splints with cotton or clean rags and tie them snugly (but not too tightly) in place with bandages, belts, neckties or strips of clothing.

Splinting is done merely to immobilize the break. Leave bone-setting to the doctor. If possible, don't splint, don't move the patient at all. If the

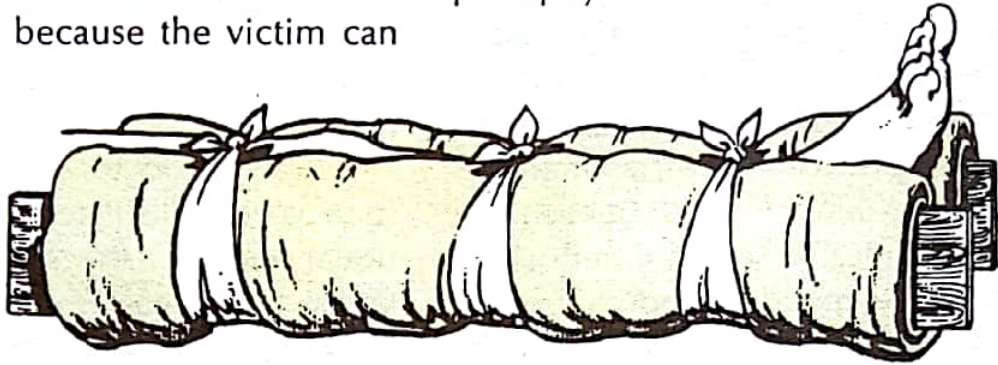


*Arm splint,
in sling*

break is in the back, neck, pelvis or skull, don't attempt to move the patient. Don't assume that no bones are broken merely because the victim can

move the injured joint or limb. To avoid complications, get a doctor promptly.

Leg splint—
padded



BURNS AND SCALDS—MAJOR

1. If clothing is on fire, smother flames with coat, blanket or rug.

2. Keep the victim lying down, to lessen shock.

3. Cut clothing away from the burned area. If cloth adheres to the burn, *don't* pull it loose; leave it and cut gently around it.

4. Carefully scrub hands to prevent contamination. Cover the burn with a thick pad of sterile *dry* dressings. This excludes air, reduces pain and contamination. If sterile dressings are not available, use freshly laundered sheets or towels.

5. Summon doctor or ambulance. Don't apply burn ointments, oil or antiseptics of any sort. Don't attempt to change dressings.

6. Administer first aid for shock (See page 137) if a large area of the body is burned.

7. If the burn is extensive, and if the victim is conscious, dissolve a half-teaspoonful of baking soda and one teaspoonful of salt in a quart of water. Give the victim half a glass of this solution every 15 minutes, to replace lost body fluids. Discontinue fluids if victim vomits.

BURNS AND SCALDS—MINOR

Run cold tap water over the burn to reduce the pain. Wash your hands thoroughly before touching the burn. If the skin is not blistered, smooth on Vaseline (or any similar product) or mineral oil and cover the burn with several sterile dressings, one atop the other. If the skin is blistered, cover the

burn with sterile dressings, to exclude air and prevent contamination. Don't apply ointment, oil or antiseptic. Don't break or drain the blisters.

Caution: Minor (superficial) burns or scalds may be dangerous if large areas are involved. Call a doctor.

DROWNING (See "Breathing Stopped" on page 134.)

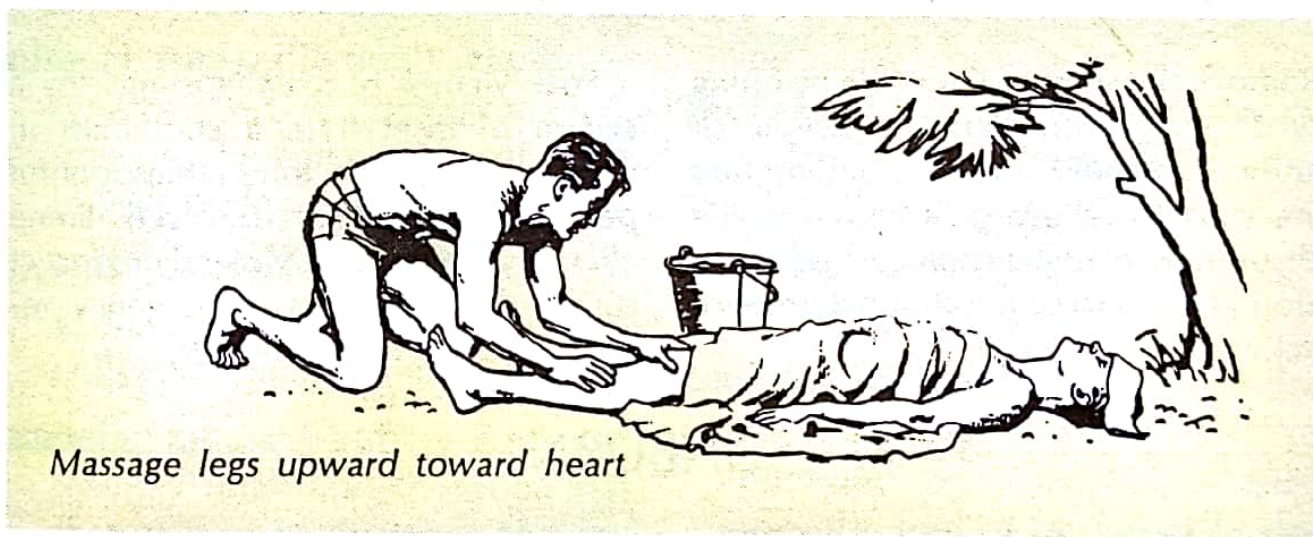
HEATSTROKE—SUNSTROKE

The victim is weak, irritable, dazed and nauseated. He stops sweating. His skin becomes hot and dry. His body temperature shoots up—maybe to 105° or higher. He may be unconscious.

Cool him off quickly. Lay him in a shaded place, with his head and shoulders slightly elevated. Pour cool water over him, buckets of it. Or wrap his head in cold, wet towels and his body in a cold, wet sheet. Massage his legs

upward toward his heart. Give him cool drinks but no stimulants. Call a doctor.

Mild sunstroke (headache, extreme fatigue, dizziness, cold and clammy skin, perhaps fainting) can be treated by rest in a shaded area (or air-conditioned room) with cold towels on the patient's head. Three or four glasses of cold water, each containing a half-teaspoonful of salt, may be given, one every 15 minutes.



Massage legs upward toward heart

POISON IVY, OAK AND SUMAC

After exposure, wash exposed areas with soap and water as soon as possible, working up a thick lather and rinsing several times. *Do not scrub with a brush.* If itching and burning already have appeared, wash the affected areas gently with soap and water, and pat on calamine lotion to soothe the itch.

Remember that clothing worn during exposure should be washed before being worn again, and that your dog or cat may carry the poison to you on its coat.

If you are frequently or seriously bothered by poison ivy, ask your doctor about the possibility of immunization.

SHOCK—HOW TO TREAT IT

In any serious injury (bleeding wound, fracture, major burns), *always expect*

shock and act to lessen it. Symptoms: the skin is pale, cold, clammy; the pulse

is rapid; breathing shallow, rapid or irregular; the injured person is frightened, restless, apprehensive.

1. Keep the patient lying down with head lower than the feet. (See exception in Step 4.)

2. Loosen his clothing.

3. Keep him lightly covered, but do not cause sweating. Don't apply heat, such as a heating pad. The objective is to conserve body heat, not to overheat the patient.

4. In case of head or chest injuries, raise the patient's head and shoulders on pillows or rolled-up coats so that his head is ten inches higher than the feet. If the patient develops difficulty in breathing, lower the head as in Step 1.

5. If the patient is conscious and thirsty, give him plain water (neither hot nor very cold), a few sips at a time. Do not give water if the patient is nauseated or has an abdominal wound. *Never give alcohol or stimulants.*

STINGS—BEE, WASP AND HORNET

Remove the stinger if possible by lifting or scraping with sterilized needle or knife. Run cold water over and around the sting to relieve pain and slow the absorption of the venom, or pack ice around it. Calamine lotion may relieve itching.

Soak victims of massive stings (by a swarm of insects) in a cool bath in which baking soda (one tablespoonful per quart) has been dissolved. Some allergic persons react violently to insect stings; this can be an emergency requiring *prompt* medical aid.

SUNBURN

If the skin is reddened but not blistered, apply cold cream or mineral oil. Do not use butter or margarine; they may irritate, and introduce infection.

If the skin is blistered or extensively burned, cover it with a sterile dressing

wet with a weak solution of baking soda (two tablespoonfuls of soda to one quart of water). Don't use greasy ointments. Don't re-expose burned skin until healing is complete. Severe or extensive sunburn requires medical aid.

Condensed from *Handbook of First Aid*
The Reader's Digest, September '60

Glossary

abdomen (AB-duh-muhn) — The part of the body containing the stomach, intestines and other digestive organs; also called "belly"

adrenal (uh-DREE-nuhl) **gland** — One of the two ductless glands, one on the upper part of each kidney, that secrete adrenalin

alveoli (al-VEE-uh-lee)—*pl.* of **alveolus**—Small cavities, pits or cells. (See diagram on page 51.)

amoeba (uh-MEE-buh) — An extremely small one-celled animal that moves by forming temporary projections that are constantly changing. Many amoebas live in water; others live as parasites in other animals.

antibody (AN-tee-bod-e)—A substance that destroys or weakens bacteria or neutralizes poisons of organic origin

artery (AR-tuhr-e) — Any of the blood vessels or tubes that carry blood from the heart to all parts of the body

bacteria (bak-TEHR-e-uh) — *pl.* of **bacterium**—Very tiny and sim-

ple one-celled microorganisms. Certain bacteria cause diseases such as pneumonia and typhoid; others do useful things such as turning cider into vinegar.

bronchial (BRONG-kee-uhl) **tubes** —Any of the subdivisions of the trachea that convey air into the lungs. (See diagram on page 51.)

capillary (KAP-uh-lehr-e)—A tube with a very slender, hairlike opening or pore. Capillaries join the end of an artery to the beginning of a vein. (See diagram on page 51.)

carbohydrate (kar-bo-HIGH-drate) —Substance composed of carbon, hydrogen and oxygen. Sugar and starch are carbohydrates.

cilia (SIL-e-uh)—Very small hair-like projections

complement (KOM-pluh-ment)—A substance in blood serum and plasma that in combination with antibodies destroys bacteria and foreign cells

coronary (KOHR-uh-nehr-e) — Of or designating either or both of the two arteries that supply blood to the muscular tissue of the heart. (See diagrams on pages 38 and 41.)

corpuscle (KOHR-pus-uhl) — Any of the cells that float in the blood, lymph, etc. Red corpuscles carry oxygen and carbon dioxide; some white corpuscles destroy disease germs.

diaphragm (DIE-uh-fram) — A partition of muscles and tendons separating the cavity of the chest from the cavity of the abdomen. (See diagram on page 51.)

duodenum (due-ah-DEE-nuhm) — The first part of the small intestine, just below the stomach. (See diagram on page 45.)

dysentery (DIS-uhn-tehr-e) — A painful disease of the intestines, producing diarrhea with blood and mucus

emphysema (em-fuh-SEE-muh) — A condition of the lungs in which there is dilation of the air vesicles following atrophy of the septa, resulting in labored breathing and increased susceptibility to infection

enzyme (EN-zime) — A chemical substance, produced in living cells, that can cause changes in other substances within the

body without being changed itself

esophagus (e-SOF-uh-gus) — Passage for food from the mouth to the stomach; also called "gullet." (See diagram on page 45.)

fibrinogen (fie-BRIN-uh-jen) — A protein found in the blood, lymph, etc., that yields fibrin in the coagulation of blood

gamma globulin (GAM-uh GLOB-yuh-lin) — A protein component of blood plasma, containing antibodies effective against certain microorganisms, as those of measles and infectious hepatitis

germ (JERM) — A microscopic animal or plant that causes disease

gullet (GUL-it) — See ESOPHAGUS

heart — The hollow, muscular organ that pumps blood throughout the body. (See diagrams on pages 38 and 41.)

hormone (HOR-mohn) — An internal secretion produced in and by one of the endocrine glands, such as the pituitary or thyroid, and carried by the bloodstream or body fluids to other parts of the body where it has a specific physiological effect

insulin (IN-suh-lin) — A hormone secreted by the pancreas that

enables the body to use sugar and other carbohydrates

intestine (in-TES-tuhn)—Part of the alimentary canal that extends from the stomach to the anus; also called "bowel"

leucocyte (LOO-kuh-site) — A white blood corpuscle; one of the tiny white cells in the blood that destroy disease germs. (See diagrams on pages 12 and 13.)

ligament (LIG-uh-ment)—A band of strong tissue that connects bones or holds organs of the body in place

liver—A large reddish-brown organ that secretes bile and helps in the absorption of food

lung—One of the pair of breathing organs in man by means of which the blood receives oxygen and is relieved of carbon dioxide. (See diagram on page 51.)

lymph node (LIMF) —Any of numerous glandlike bodies found in the course of the lymphatic vessels and producing lymphocytes and monocytes

lysozyme (LIE-suh-zime) — A bacteriolytic enzyme that serves as an antiseptic, found in tears, leucocytes, mucus, egg albumin and certain plants

macrophage (MAK-ruh-fage) — A large phagocyte

marrow (MAHR-o)—The soft tissue that fills the cavities of most bones

medulla oblongata (muh-DUL-uh ob-long-GAH-tuh)—The lowest part of the brain, at the top end of the spinal cord; that controls breathing, circulation, etc.

microbe (MY-kroh-b) — A microscopic organism; also called "germ" or "bacterium"

pelvis (PEL-vis)—The basin-shaped cavity formed by the hipbones and the end of the backbone

phagocyte (FAG-uh-site)—A white blood corpuscle, or leucocyte, capable of absorbing and destroying waste or harmful material, such as disease microbes

plasma (PLAZ-muh) — The liquid part of blood or lymph, as distinguished from the corpuscles

pleura (PLUHR-uh)—A thin membrane covering the lungs and folded back to make a lining for the thorax or chest cavity

pyloric valve (pie-LORE-ik) —One of the openings that lead from the stomach into the intestine

saliva (suh-LIE-vuh) — Liquid that the salivary glands secrete into the mouth to keep it moist, aid in chewing and start digestion

spleen (SPLEEN)—A ductless gland at the left of the stomach in

man that effects certain modifications in the blood

stomach (STUM-uk)—The most important part of the body for receiving and digesting food; loosely, "abdomen" or "belly." (See diagrams shown in illustration, page 45.)

streptococci (strep-tuh-KOK-sigh) — *pl.* of **streptococcus** — Spherical bacteria that multiply by dividing in only one direction, usually forming chains. Many serious infections and diseases are caused by streptococci.

trachea (TRAY-kee-uh)—The duct, composed of membrane and cartilaginous rings, by which air passes from the larynx to the bronchi and lungs; also called "windpipe"

uterus (U-tuhr-uhs)—The part of the body that holds and nour-

ishes the young till birth; also called "womb"

vaccine (VAK-seen)—Any preparation of disease germs, or the like, that is used for preventive inoculation

vagus (VAY-guhs) **nerve**—Either of a pair of nerves extending from the brain to the heart, lungs, stomach and other organs.

ventricle (VEN-truh-kuhl) — Either of the two lower chambers of the heart that receive blood and force it into the arteries. (See diagrams on pages 38 and 41.)

virus (VIE-ruhs) — A poison produced in a person suffering from an infectious disease; the bacteria or other cause of an infectious disease

windpipe—See TRACHEA and diagram on page 51.



